# The Late Copper Age Cemetery at *Pilismarót-Basaharc*

## István Torma's Excavations (1967, 1969–1972)

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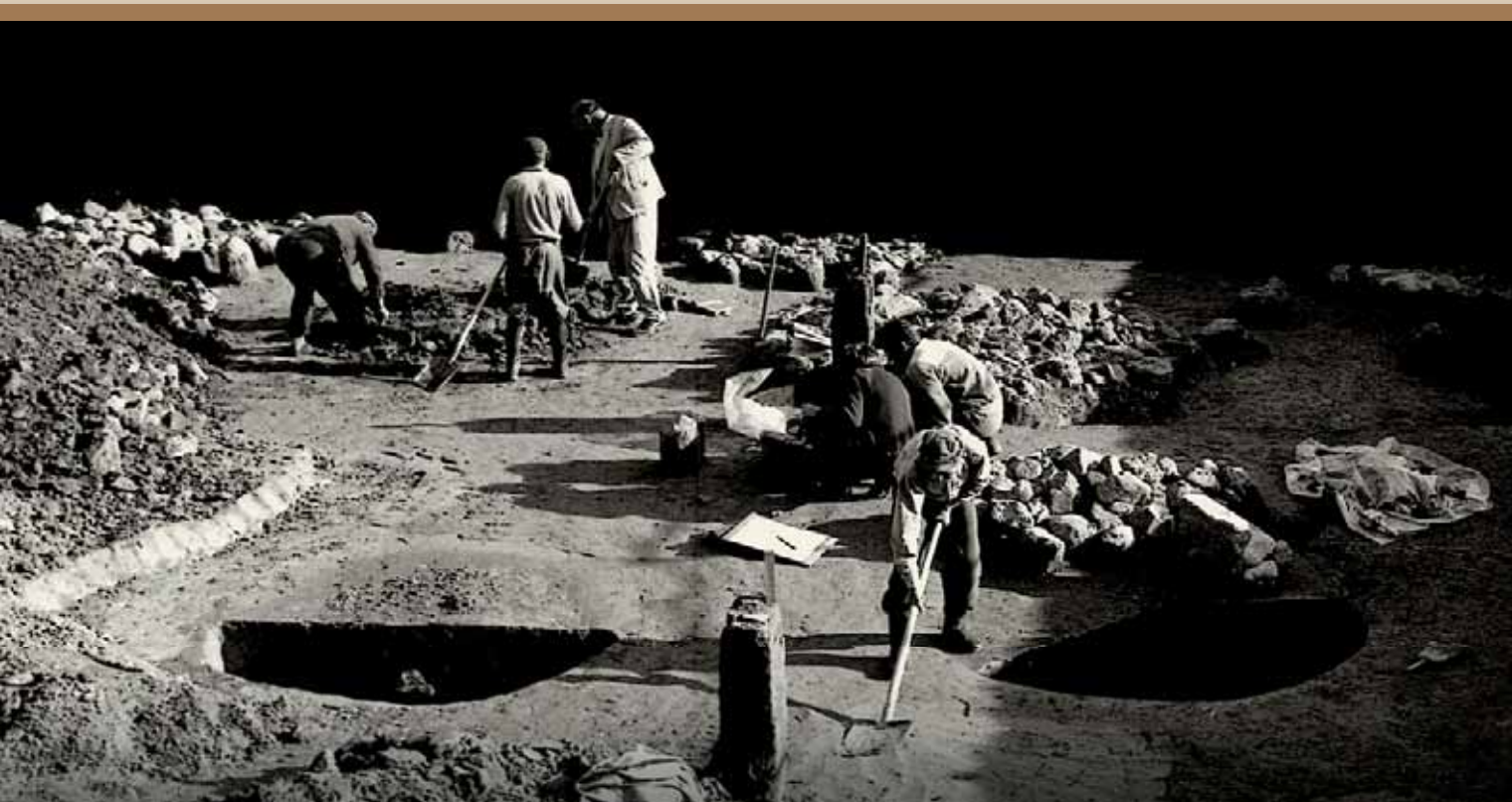
*by* Mária Bondár



Institute of Archaeology, Research Centre for the Humanities, Hungarian Academy of Sciences

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**Mária Bondár**

# THE LATE COPPER AGE CEMETERY AT PILISMARÓT-BASAHARC

## ISTVÁN TORMA'S EXCAVATIONS (1967, 1969–1972)

with contributions by
Katalin T. Biró, Erika Gál, Derek Hamilton,
Kitti Köhler and István Torma

Institute of Archaeology, Research Centre for the Humanities,
Hungarian Academy of Sciences

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Animal figurine from the cemetery (photo by János Polinger 1967)
View of the excavation (photo by Miklós Hannos 1972)

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# THE ARCHAEOLOGICAL ASSESSMENT OF THE PILISMARÓT-BASAHARC CEMETERY

MÁRIA BONDÁR

## I. PREVIOUS RESEARCH

### **Excavation history** (István Torma)

Pilismarót-Basaharc lies roughly in the middle section of the Danube Bend, opposite the confluence of the Ipoly and the Danube, at the foot of Mt. Hosszú-hegy (marked as Mt. Sas-hegy on more recent maps), a 322 m high mountain at the northern end of the Visegrád (Szentendre) Mountains. The site is located on the fringes of the Danube's post-medieval floodplain, at an altitude of 107–110 m asl *(Fig. 1)*.

A series of large-scale salvage excavations was launched in the Danube Bend and along the lower reaches of the Ipoly in 1959 prior to the construction of the Danubian hydroelectric plant at Visegrád. Copper Age, Celtic and Avar period cemeteries were uncovered alongside a late Celtic settlement during the excavations conducted by the Archaeological Research Group of the Hungarian Academy of Sciences under the direction of Nándor Fettich *(Fig. 2)*.[1]

In 1959, Nándor Fettich unearthed 196 Avar period burials in the area of kilometre stone 56.4 on both sides of Road 11 leading to Esztergom. The first six Copper Age cremation burials came to light beyond the Avar period burial ground's north-eastern edge.[2] The graves yielded finds of the Boleráz group of the Baden culture and they were the first professionally excavated and well-documented graves of the Boleráz group in the Carpathian Basin.

In 1967, when the salvage excavations preceding the construction of the hydroelectric plant were continued, Nándor Fettich intended to resume the investigation of the earlier identified Celtic cemetery. However, he was prevented from continuing his work by an illness that year and the excavation of the Celtic cemetery was only resumed in 1968. The excavation of the burial ground was eventually completed by Ida B. Kutzián in 1979.

Ida B. Kutzián called my attention to the Copper Age burials discovered in 1959. The financial resources of 1967 were re-allocated and I began the excavation of the cemetery. The burial ground of the Boleráz group, the largest in Europe to this day, was excavated in 1967 and 1969–1972.

Before beginning the excavation, I visited Nándor Fettich, who shared with me the most important information about the site. A south-west to north-east base line and a grid of 5 m by 5 m trenches perpendicular to the line was laid out for the director of the excavation in 1959. The 5 m sections of the base line were marked with the letters of the alphabet and the trenches north of the line were

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[1] For a brief description of the site and its finds, see István Torma's report in MRT 5, Site 17/10. To date, only the Avar cemetery has been fully published; Fettich's monograph also contains a plan of the site showing his trenches and their numbering (FETTICH 1965, Beilage I).

[2] See Nándor Fettich's brief report in *Régészeti Füzetek* Ser I. 13, 1960, 17, KUTZIÁN 1973, Fig. 2. In Nándor Fettich's inventory book, kept in the Archives of the Archaeological Institute, Grave 5 is described as having been uncovered in Trench ü/1. We were unable to locate the finds from the graves uncovered by Nándor Fettich: we only found the artefacts that had been published by Ida B. Kutzián. Only three graves are marked on the plan of the Copper Age cemetery, lying in Trench t/1–3 *(Fig. 5.)*.

numbered (e.g. Trench a/1).[3] Nándor Fettich specified the datum point of the excavated section of the Celtic cemetery, which according to him was marked by a wooden stake, from which one could reach the area of the Boleráz cemetery, marked by the north-western corner of Trench u/6. Complying with Nándor Fettich's request, I continued his system of the numbering of the trenches and the graves, and therefore the first grave was given the serial number 335 (even though it would have been more practical to begin the numbering of the Boleráz graves uncovered in 1959 from 1). After we ran out of the letters of the alphabet, the trenches were numbered with Arabic numerals along the horizontal axis (e.g. Trench 1/1). As it turned out during the excavation, the Nándor Fettich had specified the datum point of the already excavated Celtic cemetery erroneously and, as a result, the trenches opened during the 1967 season were mistakenly marked with the letter "u". Owing to a surveying error, Trenches a/5–a/6, opened and excavated earlier, extended slightly into the trenches we had numbered Trenches u/5–u/6 and, as a result, we could determine the correct trench number, which would have been s/5–s/6, meaning that our excavation area lay 15 m farther to the west according to Fettich's trench system. The numbering of the trenches was not corrected to avoid confusion in the trenches being excavated at the time and the trenches to be investigated in the future. Unfortunately, the grid system was not tied into the national grid system when the base line and the trenches were laid out, In 1980, Pál Farkas surveyed the site: his plan shows the areas excavated by Nándor Fettich and myself lying north of the road as well as Ida B. Kutzián's trial trench opened in 1979 without any corrections.[4] We used the corrected site plan for this publication.

The earlier seasons had shown that the uppermost 40–60 cm thick soil layer was archaeologically "sterile" and devoid of finds, and therefore this layer was mechanically stripped away during later seasons with a grader provided by the local co-operative. The excavated trenches were later backfilled with machinery, saving substantial amounts of time and money.

*Table 1. Overview of the successive excavation seasons*

| Year | Grave number | Number of graves | Excavated area ($m^2$) | Cost (HUF) | Remarks |
|---|---|---|---|---|---|
| 1959 | Graves 1–6 | 6 | 45 | | Nándor Fettich's excavation<br>Three graves were marked on the site plan |
| 1967 | Graves 335–365* | 30 | 325 | 23,000 | The number 345 was omitted from the numbering; there was an additional burial, Grave 347/a |
| 1968 | Graves 366–381 (Celtic burials) | | | | The area of the Copper Age cemetery was not investigated |
| 1969 | Graves 382–406 | 27 | 330 | 27,000 | Additionally, the complete excavation of Graves 358, 361, 363, 364<br>Two additional burials: Graves 384/a and 390/a |
| 1970 | Graves 407–415 | 9 | 130 | 8000 | Additionally, the complete excavation of Graves 364 and 401 |
| 1971 | Graves 416–446 | 31 | 905 | 60,000 | Additionally, the complete excavation of Graves 365 and 399 |
| 1972 | Graves 447–458 | 13 | 65 | 25,000 | Additionally, the complete excavation of Grave 405<br>One additional burial: Grave 459 |
| **Total** | | **6+110** | **1740**** | **143,000** | |

* There is no Grave 335: the correct number is Grave 336.

** The area of the "empty" trenches opened around the cemetery is not included in this figure

[3] The trenches immediately bordering on the base line were only marked with letters, but this did not affect the area of the Boleráz cemetery.

[4] Archives of the Archaeological Institute, filed under Dok. 12/2002.

One important observation made during the excavations was that the cemetery's area, lying at the foot of Mt. Hosszú-hegy and on the edge of the Danube's former floodplain, was largely covered with clay washed down from the mountain during the millennia and, although to a smaller extent, by the silt left behind by successive floods. These deposits formed a homogeneous, unstratified layer, which protected the prehistoric graves. At the same time, the removal of the archaeologically sterile layer increased the cost of the excavation: a total of HUF 143,000 was spent on earth-moving operations during the five excavation seasons (an insignificant sum by today's standards, but an extremely high amount at the time).

The boundaries of the cemetery could be fairly precisely determined. We opened half-sized trenches and trial trenches along the cemetery's western, northern and eastern edge to be quite certain. As a result, we may assert that the Copper Age burial ground has been completely excavated – at the most, some three or four burials might perhaps lie under the road itself by the cemetery's south-eastern edge. The cemetery covered a 70 m by 20–35 m large south-east to north-west oriented oval area.

In the first excavation season, the depth data were measured from the nearest trench corner. From 1969, a fixed datum point was used.

With the exception of stray finds of a Late Bronze Age winged axe, a fourth-century bronze coin and a fourteenth-century silver coin, only Copper Age and Celtic features were unearthed in the Copper Age cemetery. The Late Iron Age occupation layer was indicated by scattered Celtic pottery sherds lying at a depth of 60–80 cm under the uppermost homogeneous layer devoid of finds. The soil marks of the pits with a reddish-brown, blackish fill marking the edge of the late Celtic settlement generally lay at a depth of 80–150 cm. The 190–260 cm deep pits yielded an abundance of late Celtic finds. Fortunately for us, very few Boleráz graves had been disturbed by these Celtic pits.

The Celtic occupation level was followed by a homogeneous layer. The Copper Age occupation level was marked by scatters of pottery sherds. The stone packing of the graves lay at the same depth as the pottery fragments. It was clear after the excavation of larger areas that no grave pits had been dug in the Copper Age cemetery and that neighbouring graves lay at the same depth *(Fig. 5)*, suggesting that the ashes and the grave goods had been simply placed on the ground. This was later confirmed by the comparison of the levelling data measured from 1969 onward. The south-west to north-east base line ran roughly parallel to the slope of Mt. Hosszú-hegy and thus the trenches and the graves in them followed the natural slope, as shown also by the data in *Table 2*. The different depth data can in part be attributed to the graves extending into the next row of trenches and in part to the unevenness of the one-time prehistoric ground surface. The difference between the shallowest and deepest-lying graves was over 2 m (225 cm).

*Table 2. Depth data of the trenches (see Fig. 4)*

| Trench series | Depth | Divergences | Remarks |
|---|---|---|---|
| Row 1 | -30–40 cm to -90 cm | One deeper-lying grave (-90–114 cm) extended into Row 2<br>A stone packing lying -90–122 cm deep sloped strongly | This row lay closest to the mountain's foot and the natural deposits were thinner owing to the steeper slope |
| Row 2 | -90–120 cm | One grave lay at a depth of -155 cm | |
| Row 3 | -123–140 cm | One grave lay at a depth of -144–164 cm | |
| Row 4 | -145–165 cm | One grave lay unusually deep, at a depth of -177–182 cm | |
| Row 5 | -156–190 cm | One grave lay higher, at a depth of -146 cm, one deeper, at a depth of -205 cm | |
| Row 6 | -182–235 cm | | |
| Row 7 | -210–265 cm | | |

The layer underlying the Copper Age graves was randomly tested; we did not encounter any finds in the lighter prehistoric humus layer.

A stone run lay some 25–30 cm under the graves at the south-eastern edge of the cemetery, but extending beyond its edge, on the higher part of the one-time and the current slope. Only after a partial clearing did it become obvious that it was unrelated to the burial ground and that it originated from an earlier period. The stones accumulated at the base of the slope when there was no vegetation to hinder their movement, perhaps during the Pleistocene. We know that during the Copper Age and in later periods, the slope of Mt. Hosszú-hegy had a vegetation cover that prevented the downward roll of stones. We did not find any stones in the layers devoid of archaeological finds.

The excavation photos were made by Miklós Hannos, János Polinger and Lajos Sugár from the staff of the Archaeological Institute of the Hungarian Academy of Sciences; the field drawings by Gábor Szatmáry, an architecture student at the time, and by illustrators Ida Szathmáryné Polgár and Mária Wolsky, the latter two as part of their tasks at the Institute. Katalin Horusitzky, the Institute's conservator, participated in the excavation for a few days.

Archaeology students Piroska Biczó, Marietta Csányi, Magda Ferch, Dorottya Gáspár, Csaba Héjj, Jolán Horváth, Márta Lakatos and Magdolna Medgyes worked on the excavation for various lengths of time, as did Éva Maróti, still a secondary school student at the time.

There was enormous interest in the excavation. In late September 1967, almost the entire staff of the Institute visited the site as part of an excursion led by László Gerevich, the then director. István Horváth, director of the Balassa Bálint Museum in Esztergom, the regionally competent museum, turned up regularly with his wife Márta Kelemen. Other regular guests at the excavation were Mátyás Szőke, archaeologist of the nearby Mátyás Király Museum in Visegrád, and Géza Laczus, director of the Börzsöny Museum in Szob, who contributed to our work by recruiting excavation workers. Of our foreign colleagues, Anton Točik, director of the Archaeological Institute in Nitra, paid a visit to the excavation in the company of Ida B. Kutzián and Erzsébet Patek.

The number of civilian visitors was outstandingly high owing to the proximity of the road. Several newspaper articles were published about the extensive Copper Age cemetery yielding various unique finds.[5] The first animal figurine recovered from one of the burials was shown in the news bulletin of the national television.

## The primary post-excavation processing of the site and its finds

István Torma reported the results of the excavation in several articles written for the broader public and for the academic community. A few finds from the cemetery and the burial rites practiced in this outstandingly important cemetery were presented at the international symposium on the Baden culture organised by the Archaeological Institute of Nitra in Vozokány/Kisvezekény in 1969.[6] Ida B. Kutzián

[5] A few examples, without any pretense of completeness, Rézkori temető Basaharcon [A Copper Age cemetery at Basaharc]. *Dolgozók Lapja*, September 7, 1969; Négyezer éves rézkori temető [A four-thousand-year-old Copper Age cemetery. *Népszava*, September 17, 1969; Mrs Mihály Benda, Négyezer éves temetőt találtak Esztergom határában [A four-thousand-year-old cemetery on the outskirts of Esztergom]. *Esti Hírlap*, September 13, 1969; Márta Sárvári, Mit hozott felszínre egy év munkája a föld alatti Magyarországból [What has been unearthed during a year's work]. *Magyar Nemzet*, March 4, 1970; Mrs Mihály Benda, 4000 éves rézkori temetőt tártak fel… [Excavation of a four-thousand-year-old Copper Age cemetery]. *Népszabadság*, August 4–5, 1970; Különleges régészeti lelet Pilismaróton [An unusual archaeological find from Pilismarót]. *Dolgozók Lapja*, July 4, 1971 and *Népszava*, July 9, 1971; László Esztergomi, Nyomozás egy névtelen nép után [In search of a nameless people]. *Magyar Hírlap*, July 19, 1971; Ásatás [Excavation]. *Dolgozók Lapja*, June 17, 1972; László Hegedüs, Basaharc. *Új Ember*, September 10, 1972.

[6] Torma 1973.

contributed a study on the finds from the graves excavated by Nándor Fettich to the conference volume *(Fig. 3)*.[7] A brief description of the animal figurines appeared in the catalogue accompanying the exhibition of prehistoric figurines from Hungary in Vienna and Munich.[8]

István Torma wrote a brief preliminary report on the Copper Age cemetery after the conclusion of the excavation: "A total of 110 burials were uncovered in the first professionally excavated burial ground in the entire distribution of the Copper Age Boleráz group. A thick layer of soil was deposited over the eastern section of the site where the cemetery lay, as a result of which the graves dug near the original, prehistoric humus level lay at a depth of 100–180 cm from the modern surface. All the graves contained cremation burials. The ashes were generally strewn on the ground or, more rarely, placed in a vessel, usually a bowl. In many cases, the ashes were covered with a bowl turned upside down. A small heap of stones collected in the cemetery's broader area was piled over the graves; however, most of these stones rolled away and covered an area 2–3 m across above the burial. In addition to the bowl covering the ashes, the graves contained one or two jugs, pots and large urn-like vessels. Some of the vessels were already broken and fragmented by the time they were deposited in the grave. Vessels were often set on top of or beside the stone pile covering the grave. Two burials yielded a shaft-hole stone axe and spindle whorls, one grave a stamp seal, two graves a clay cone decorated with a herringbone pattern, and five graves animal figurines. The grave assemblages are made up of artefact types typical for the middle and late phase of the Boleráz group. The semi-spherical and funnel-necked bowls are either plain or decorated with small knobs and dense bundles of combed or incised lines. Their interior often bears a channelled pattern. Jugs and cups are most often decorated with channelling and fitted with loop handles and string-hole lugs, while pots and larger vessels are adorned with cordons, knobs and zig-zag patterns. The unstratified Copper Age finds lying scattered among the graves included Ludanice fragments and sherds decorated in the stab-and-drag (*Furchenstich*) style."[9]

Mention must here be made of another assemblage of Baden finds originating from Pilismarót-Basaharc. The first description of this assemblage, made up of ten vessels in the Schmidt Collection in Szombathely, was penned by János Banner, according to whom "the assemblage came to light in an area known as Basaharc lying between Pilismarót and Esztergom when Road 11 running between Budapest and Esztergom was rebuilt."[10] In his monograph on the Baden culture, he noted that "unfortunately, the find circumstances of this extremely interesting assemblage are not known. All we know is that it came to light during road construction and that it was first housed in the Schmidt Collection in Szombathely, whence it was reportedly taken to Esztergom as part of an exchange; however, it has proven impossible to identify the assemblage."[11] From what was known about the Basaharc cemetery at the time, Viera Němejcová-Pavúková assumed that the bowl with channelled decoration in its interior published by János Banner alongside other vessels originated from the Pilismarót-Basaharc cemetery and that it came from the burial ground's latest part, which she believed to lie under the modern road.[12] However, István Torma contends that no more than one or two graves lie buried under the road. The finds from the cemetery's latest burials (bowls covered with zig-zag lines and a jug with channelling encircling the neck) can, at most, be contemporaneous with the Fonyód type finds, and thus the finds published by

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[7] Kutzián 1973, Fig. 2, without grave numbers. We could subsequently identify the graves as follows: Fig. 2. 1: Grave 2, Fig. 2. 2: Grave 3, Fig. 2. 3–6: Trench a/5.

[8] Torma 1972, 24–26, and Torma 1973a, 24–26.

[9] MRT 5, 286, Site 17/10.

[10] Banner 1941, 3–4.

[11] Banner 1956, 39, Taf. XIII. 14–23, 26–27. There is no reference to this material in the MRT 5 volume either among the sites in the Basaharc area or among the ones in the Szobi rév area. István Torma discussed these finds in a later study (Torma 1977, 56).

[12] Němejcová-Pavúková 1974, 345.

Banner can hardly have originated from the cemetery. The finds in question probably came to light somewhere by Road 11 and mark a site that is unassociated with the Boleráz cemetery. István Torma believes that they come from a site lying roughly 1 km from the Basaharc cemetery along the road leading to the Szob ferry, where finds representing the classical Baden period have come to light.[13] Vessels matching the ones published by János Banner were later recovered from countless features investigated during the salvage excavations preceding the construction of the Bős–Nagymaros dam,[14] and thus the contemporaneity of the assemblage and the material unearthed during the later excavation, both dating to the classical Baden period, can hardly be challenged.[15] A wholly unfounded speculation, namely the association of the Szobi rév settlement with the Basaharc cemetery, that has recently appeared in the archaeological literature must definitely be refuted in the light of the above. There is no relation whatsoever between the two sites in terms of their chronology because Boleráz finds do not appear in the material from the Szobi rév site.

The primary processing of the material from the Pilismarót cemetery was undertaken in the Archaeological Institute of the Hungarian Academy of Sciences. The field documentation was completed after each excavation season. Fair-copies of the excavation plans and drawings were made, and the conservation, drawing and photographing of the finds was begun. The hand-written and typed field diaries, the survey and levelling diaries, the excavation reports, the original excavation plans, grave plans, grave photos, diapositives and the combined cemetery plan for each season[16] as well as the drawings and photos made of the finds are housed in the Institute's Archives. The greater part of the burials uncovered between 1967 and 1971 (Graves 336–446) are marked on the combined plan of the Copper Age cemetery made by Mária Wolsky; however, only hand-drawn plans were made of the graves unearthed during the 1972 season (Graves 447–458) and they were not marked on the combined plan of the cemetery at the time.

The greater part of the finds was conserved and restored by Katalin Horusitzky and Ágnes Zamadits, while a smaller portion by Katalin Kincs (the latter's work often left much to be desired, even allowing for the poor state of preservation of the finds).

István Torma personally wrote the grave number and the serial number of each grave good onto the finds. Following the conservation and restoration work, László Susits, Lajos Sugár and János Polinger photographed the finds; the photographs were glued onto cards and the excavator was asked to specify the grave from which a particular find was recovered. Simultaneously, Torma too prepared a catalogue of the finds using the period's most modern technique: each find was recorded on an A5-sized edge-punched card together with the grave number, the excavation season and the excavator's remarks.

The initial dynamic progress came to a standstill when István Torma became involved in the Institute's archaeological topography project and his work in that field left him no time for the cemetery's assessment and publication.

István Torma planned the publication of the cemetery in the late 1980s and he asked me to collaborate in this work. The finds were inventoried and the material drawn and photographed earlier was checked at the same time too.

The cataloguing of the finds was prepared by István Torma. I undertook the description of the finds and I wrote the inventory numbers onto the artefacts,[17] as well as onto the index cards in the Archives

[13] TORMA 1977, 56.

[14] KEMENCZEI–STANCZIK 1979, Pl. 3.

[15] I would here like to thank József Korek and Tibor Kemenczei for their kind permission to work with these finds. I inventoried the finds from the Szobi rév site in the late 1980s on the request of the Hungarian National Museum, and thus I have personally seen all the finds from that site.

[16] Tracing paper drawing no. 7647 in the Archives of the Archaeological Institute.

[17] Balassa Bálint Museum, Esztergom, inv. nos 88.12.1–88.115.3 and 88.133.1–4 (2215 pieces).

and the punched-edge cards. Next, István Torma went over the description of every grave and its finds, and checked them against the artefacts. We looked at the problematic finds, clarified the inconsistencies and made the necessary corrections. While reading through the catalogue of the graves and their finds, it might sometimes appear as if fragments of the same vessel were inventoried under different numbers, but this is misleading because it is due to the similar description of near-identical pottery fragments – we checked and re-checked every single fragment of this type to ensure that the pieces inventoried under separate numbers indeed originate from different vessels, The data were rechecked again when the finds were drawn.

We encountered several problems during the inventorying of the finds. Firstly, despite the careful handling and treatment of the finds, a few mistakes and slips of the pen were inevitably made. Another complication was that the greater part of the Late Copper Age material was very poorly preserved owing to its exposure to the elements for long centuries and the minimal protection afforded by the stone packing. The larger vessels, especially the thin-walled bowls, often fell apart after restoration and photographing,[18] and the finds sometimes became mixed up during the repeated repackaging and transportation. In some cases, the original inscription wore off, and thus a few finds could not be identified (these are listed among the unstratified finds and the finds unassociated with the burials in the Catalogue).[19] At the same time, the photos made a few months after the excavation and the drawings preserved in the conservation diaries enabled the conclusive identification of several vessels.[20]

Several artefacts had to be conserved and restored for a second time,[21] and quite a few vessel fragments recovered from the graves had to be photographed because there were no photos of these.[22] We tried to identify the missing objects from the documentation and sifted through the available drawings, photos and descriptions. The objects loaned to exhibitions organised in other museums occasionally brought inventorying to a temporary standstill. Several unique and remarkable finds of this extraordinary site – from both the Copper Age and the Celtic burial ground – were displayed at various museums[23] and these were only returned after the dismantling of the exhibitions, first to the Hungarian National Museum and only afterwards to the Archaeological Institute.

The few polished stone tools turned up quite unexpectedly. They had been originally given to Ida B. Kutzián for sampling and provenancing, but were later nowhere to be found in the Institute. In 2009, Eszter Bánffy visited the Kalocsa museum, where she was given a box of finds that had been mistakenly taken to the museum.[24] To our delight, the box contained the missing stone axes of the Pilismarót graves.

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[18] The vessels that fell apart after they were photographed are the following: a bowl from Grave 338 (*Pl. 2. 10*, inv. no 88.14.2), another bowl from the same grave (*Pl. 2. 5*, inv. no. 88.14.4), a bowl from Grave 340 (*Pl. 4. 6*, inv. no. 88.16.2), another bowl from the same grave (*Pl. 4. 5*, inv. no. 88.16.3), a bowl from Grave 343 (*Pl. 5. 1*, inv. no. 88.19.1), a bowl from Grave 344 (*Pl. 5. 6*, inv. no. 88.20.2), a bowl from Grave 346 (*Pl. 6. 1*, inv. no. 88.21.2), a bowl from Grave 363 (*Pl. 15. 1*, inv. no. 88.38.2), a bowl from Grave 383 (*Pl. 18. 1*, inv. no. 88.43.1), a jug from Grave 422 (*Pl. 38. 6*, inv. no. 88.81.4), a bowl from Grave 427 (*Pl. 40. 1*, inv. no. 88.85.1), and a bowl from Grave 436 (*Pl. 43. 2*, inv. no. 88.94.2).

[19] These finds were inventoried under nos 88.116.1–88.170.1 (113 lots)

[20] A bowl from Grave 401 (*Pl. 29. 4*, inv. no. 88.62.3), a bowl from Grave 420 (*Pl. 36. 9*, inv. no. 88.79.2), a bowl from Grave 441 (*Pl. 44. 9*, inv. no. 88.98.2) and a bowl from Grave 444 (*Pl. 46. 1*, inv. no. 88.101.1).

[21] These were conserved and restored by Lucia Glattfelder.

[22] These photos were made by Tibor Kádas and Csilla Tóth.

[23] Torma 1972, Kat. Nr. 276, Taf. 30, Abb. 11, Torma 1973a, Taf. 30 (Vienna and Munich), the permanent exhibition of the Hungarian National Museum, the exhibition of the Castle Museum in Esztergom and the Jubilee Exhibition of the 150-year-old Hungarian Academy of Sciences.

[24] I would here like to thank Rozi Kustár, who was working in the Kalocsa museum at the time, for locating the finds, and Eszter Bánffy, who brought the finds back to Budapest.

Very few animal bones were recovered from the burials. These were packed away together with the finds, but were not inventoried. The animal bone sample was examined and analysed by Erika Gál.[25]

We also succeeded in locating the cremated human remains from the cemetery, which were quite insubstantial compared to the number of graves because quite a few graves contained solely grave goods, with only a minimal amount of human remains or none at all.

Conforming to the general practice at the time, no soil samples were collected from the graves during the excavation and neither were the andesite tuff boulders of the stone packings preserved, which had been collected on the slopes of the neighbouring mountains during the Late Copper Age. The director of the excavation did collect the unworked fluvial molluscs and snails at the beginning of the excavation; later, however, he did not pack them away with the other finds because he mistakenly believed that they were unassociated with the burials. Thus, only the molluscs and snails found during the re-examination of the finds for this publication could be submitted for a species determination according to modern standards.[26]

In 2000, the inventoried finds were returned to the Balassa Bálint Museum, where they are currently housed.

It was our intention from the very beginning to publish not only "artistic" illustrations of the finds, but also drawings with a vessel profile conforming to the professional requirements. The printing technology of the 1980s did not enable illustrations of a photo combined with a drawn vessel profile, and thus we commissioned Bernadett Dukay to make a drawing of the finds that had not been drawn by Ida Szathmáryné Polgár , the Institute's talented illustrator. At the time, it seemed that the assessment of the finds would soon be completed. Sadly, this was not the case. In the 1990s, both István Torma and I were engaged in other projects in the Institute. In 2002, Pál Raczky invited me to participate in the assessment of the Late Copper Age cemetery of Budakalász, a project that absorbed all my time and energy. The monograph of this remarkable burial ground was published in 2009 through a series of grants from the Hungarian Scientific Research Fund (OTKA).[27]

The assessment of the Pilismarót cemetery was continued between 2012 and 2014 by means of two OTKA grants.[28] Based on the information recorded on the punched-edge cards and the inventory books, I created a database of the cemetery's graves and their finds in Excel format, complemented with the available new information (photos, drawings, typological classification, anthropological data, etc.). The database enabled various statistical analyses as well as the plotting of distribution maps.

The digitisation of the excavation and artefact photos was performed in the Archaeological Institute, while the scanning of the negatives made of the graves during the excavation was outsourced to specialist services.

Katalin Tolnai of the Documentation Centre of the National Cultural Heritage Protection of the Hungarian National Museum digitised the plans drawn on tracing paper to different scales without datum points and integrated them with the vectorised cemetery plan with GPS coordinates she had prepared.

István Torma's hand-drawn plans record the letter and number combinations assigned to the trenches as well as the boundary of the area investigated by Nándor Fettich and the location of the Avar cemetery.[29] We used this information during the processing of the data. Together with Katalin Tolnai, I prepared the combined plan of the site showing the areas excavated by Nándor Fettich, István Torma

[25] See her study in this volume (pp. 367–379).

[26] I am grateful to Pál Sümegi (Department of Geology and Palaeontology, Faculty of Natural Sciences and Information Technology, Szeged University) for undertaking the examination of the molluscs and snails.

[27] Bondár–Raczky 2009 (OTKA Grant T 37503, OTKA Grant T 62689 and OTKA Grant PUB 77431).

[28] OTKA Grant K 104276 and OTKA Grant PUB-K 114482.

[29] Archives of the Archaeological Institute, filed under Dok. 10/1970.

and Ida B. Kutzián. The trench numbers are shown on this plan together with the areas investigated during successive excavation seasons, the latter marked with different colours *(Fig. 4, Fig. 6. 1)*. A glance at the plan reveals that there are divergences regarding Trenches sz, t, u and ü between Fettich's and Torma' "chequerboard" (see above). We also plotted the Celtic features *(Fig. 6. 2)* because some are mentioned in the grave descriptions. We added the graves unearthed in 1972 to the combined cemetery plan showing the graves and their stone packing uncovered during the 1967–1971 excavation seasons prepared by Mária Wolsky *(Fig. 5)*. In the later chapters of this volume, the plans showing the distribution of various finds are based on a simplified version of this plan on which the stone packings are marked with polygons *(Fig. 7)*, retaining the grid format in order to make the location of individual graves easier.

About one-third of the graves (forty-six burials) of the Pilismarót-Basaharc cemetery yielded a sufficient amount of calcined human bones that was suitable for analysis. No more than a few bone splinters were recovered from twenty-six graves and thirty-eight burials did not contain any human remains at all. The anthropological analysis of the surviving cremains was performed by Kitti Köhler,[30] who together with Derek Hamilton also selected the samples for the radiocarbon dating. Very few laboratories are capable of providing reliable radiocarbon dates from cremated bone remains. We chose the Scottish Universities Environmental Research Centre in Glasgow because Derek Hamilton is one of the acknowledged experts in this field.[31]

Few lithics were recovered from the graves (four broken axes and seven blades). These finds were analysed by Katalin T. Biró of the Hungarian National Museum,[32] while the raw material of the stone axes was determined by Sándor Józsa of the Department of Petrology and Geochemistry of the Faculty of Science of the Eötvös Loránd University.

Much of my energy during the preparation of the present volume went into assembling the illustrations presenting the grave goods. When we began editing the illustrations after the digitisation of the grave photos and the photos of the graves goods as well as of the drawings, I realised that many of the smaller pottery fragments had not been drawn and that this would have to be done swiftly. In 2014, we went through the entire material in the Balassa Museum of Esztergom with illustrator Magda Éber and made the necessary photos[33] and drawings[34] that were still missing – in effect, we re-examined the entire assemblage again.[35] We made drawings of the finds of which neither a photograph nor a drawing was available and we also checked the scale and accuracy of the earlier drawings. The plates contain all available information on a particular grave: the grave photo(s)[36] and the graphs of the radiocarbon measurements for the burials that had been sampled as well as the photos, drawings and vessel profiles of the grave goods, all drawn according to uniform principles and scales.

As mentioned in the above, we had to standardise and bring to the same scale photos and drawings made in different styles. We sometimes found that the vessel or pottery fragment in question could no longer be found or that it had fallen apart owing to its crumbly fabric, and could no longer be photographed and drawn again. In these cases, we used an earlier drawing, if one was available.

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[30] See pp. 319–347 in this volume.

[31] See pp. 349–354 in this volume for the results of the analyses.

[32] See pp. 355–366 in this volume.

[33] Made by Péter Hámori and Mária Bondár.

[34] Made by Magda Éber.

[35] I am grateful to Edit Tari, Mónika Merczi, Etelka Kövecses Varga and Gergely Tolnai who helped me in many ways while I was working in the museum and who provided access to the artefacts on display in the exhibition of the Castle Museum.

[36] The photos sometimes lack a N arrow and they rarely show the broader area around the grave, thus their identification was not always an easy task.

I worked out the concept and design of the plates, while the graphic work was done by Magda Éber.

In spring 2014, István Torma showed me the site, providing me with a better idea and understanding of the cemetery's location and its broader environment *(Fig. 8)* than I could ever have gained from the field documentation.

## Acknowledgements

I am most grateful to István Torma for generously inviting me to participate in the publication of this remarkable cemetery and for his constant encouragement and selfless help. He was always willing to read through draught versions of the manuscript, correct any errors I made and generously share with me his knowledge of the site and its excavation. His contribution to the chapter on the site's excavation history contains many finer details that only he could add to this work.

I wish to thank my colleagues at the Archaeological Institute who participated in this work by photographing and drawing the finds as well as by the conservation and restoration of the artefacts. Their invaluable assistance is gratefully acknowledged in the excavation history.

A special appreciation is extended to the former and current staff of the Balassa Bálint Museum in Esztergom, Márta H. Kelemen, István Horváth, Edit Tari, Mónika Merczi and Etelka Kövecses Varga for their help, and to Gergely Tolnai, who made available for study the artefacts displayed in the Castle Museum.

I am grateful to Katalin T. Bíró who ensured access to the animal figurines displayed in the Hungarian National Museum for drawing.

Last, but certainly not least, I wish to thank the staff of the Archives of the Archaeological Institute who were immensely helpful in locating the field documentation, drawings, photo negatives, diapositives, conservation diaries and other documents. Special thanks are due to Péter Hámori for the photos and to Magda Éber for the drawings.

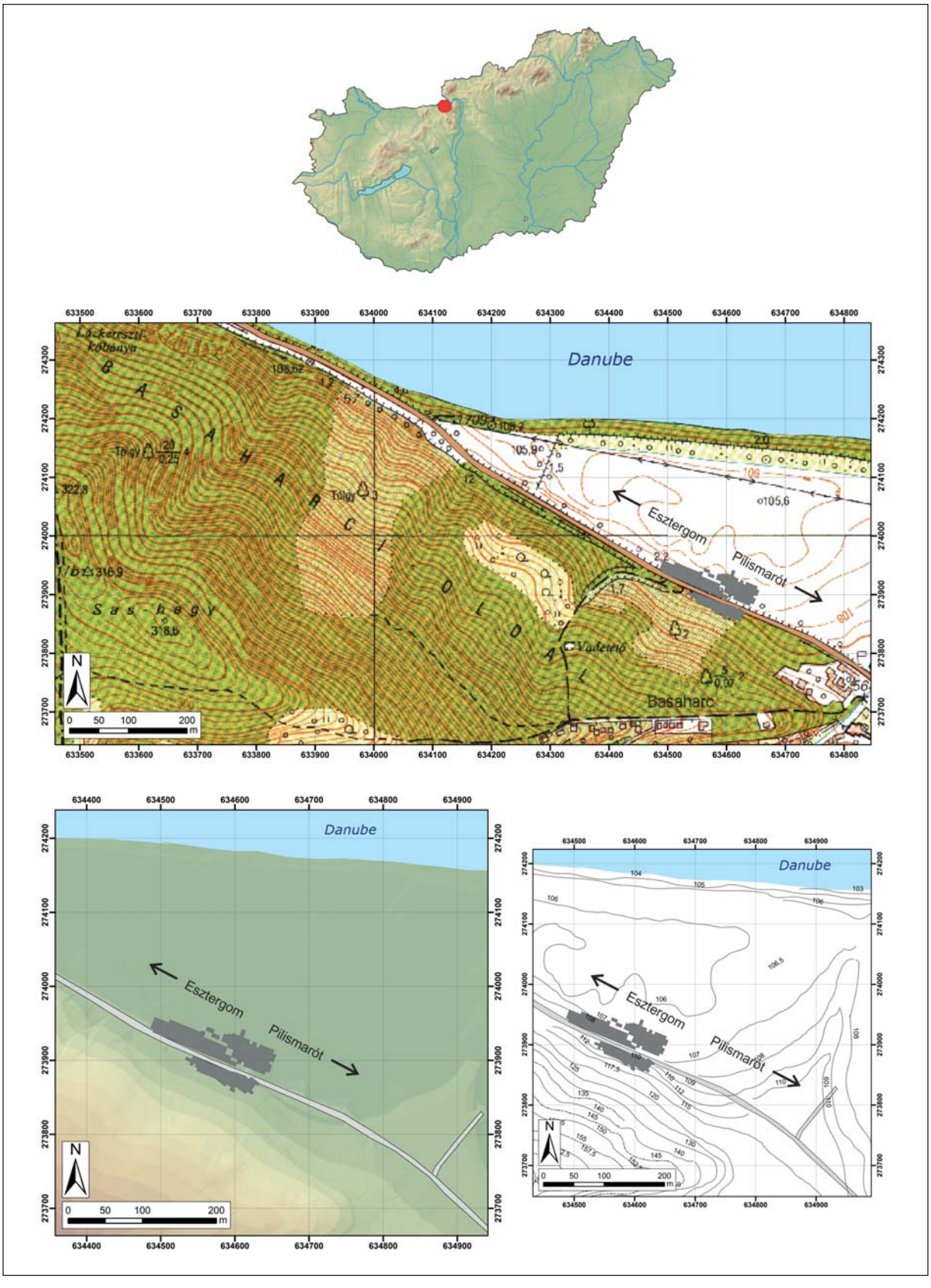


*Figure 1. Pilismarót-Basaharc. The site and the excavated area (map and digitisation by Katalin Tolnai)*

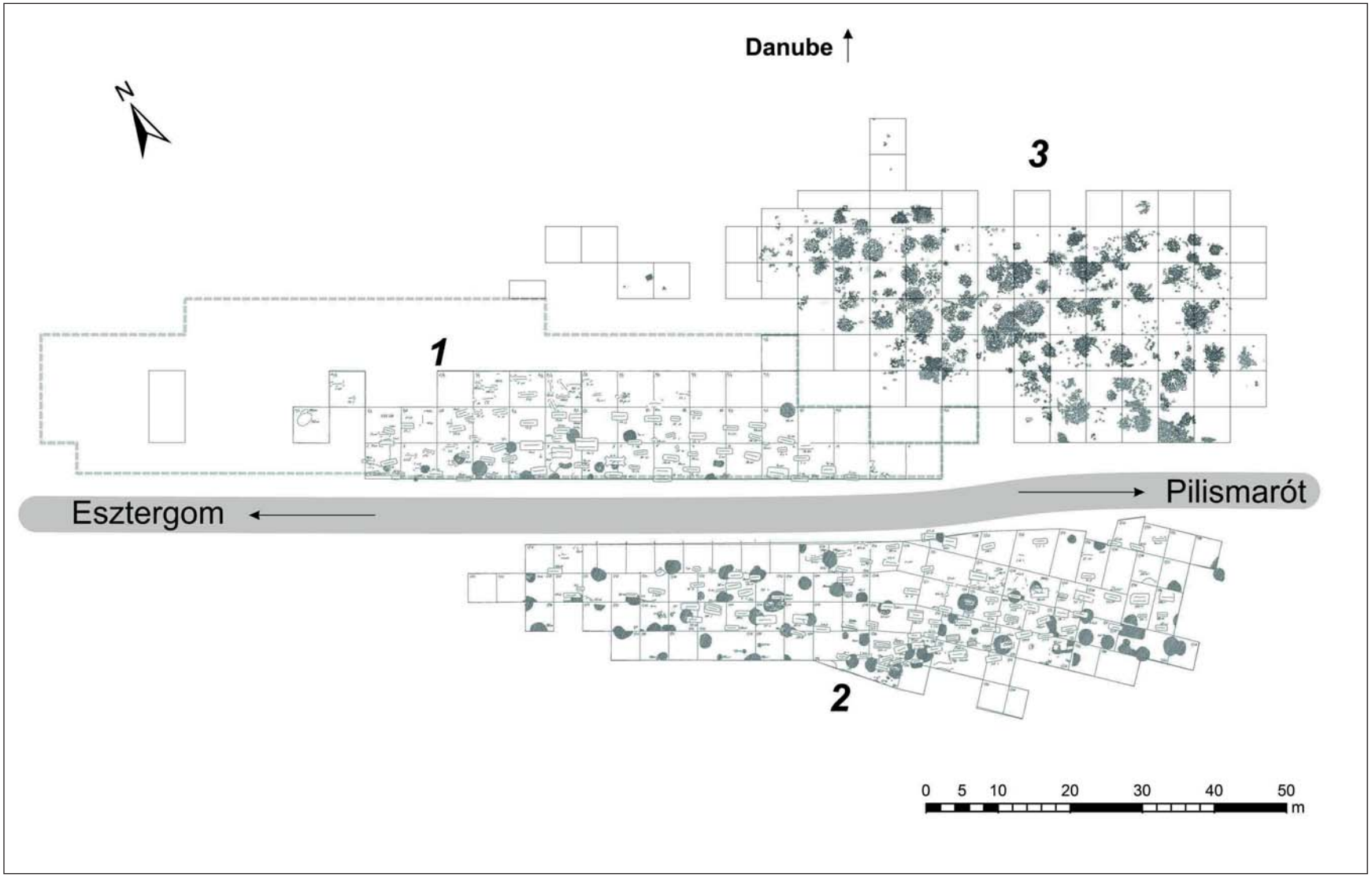


*Figure 2. Pilismarót-Basaharc. Plan of the site and the excavation grid. 1–2. Nándor Fettich's excavation: the Celtic settlement and cemetery, and the Avar cemetery (after* FETTICH *1965, Supplements I–IV), 3. István Torma's excavation: the Copper Age cemetery (digitisation by Katalin Tolnai)*

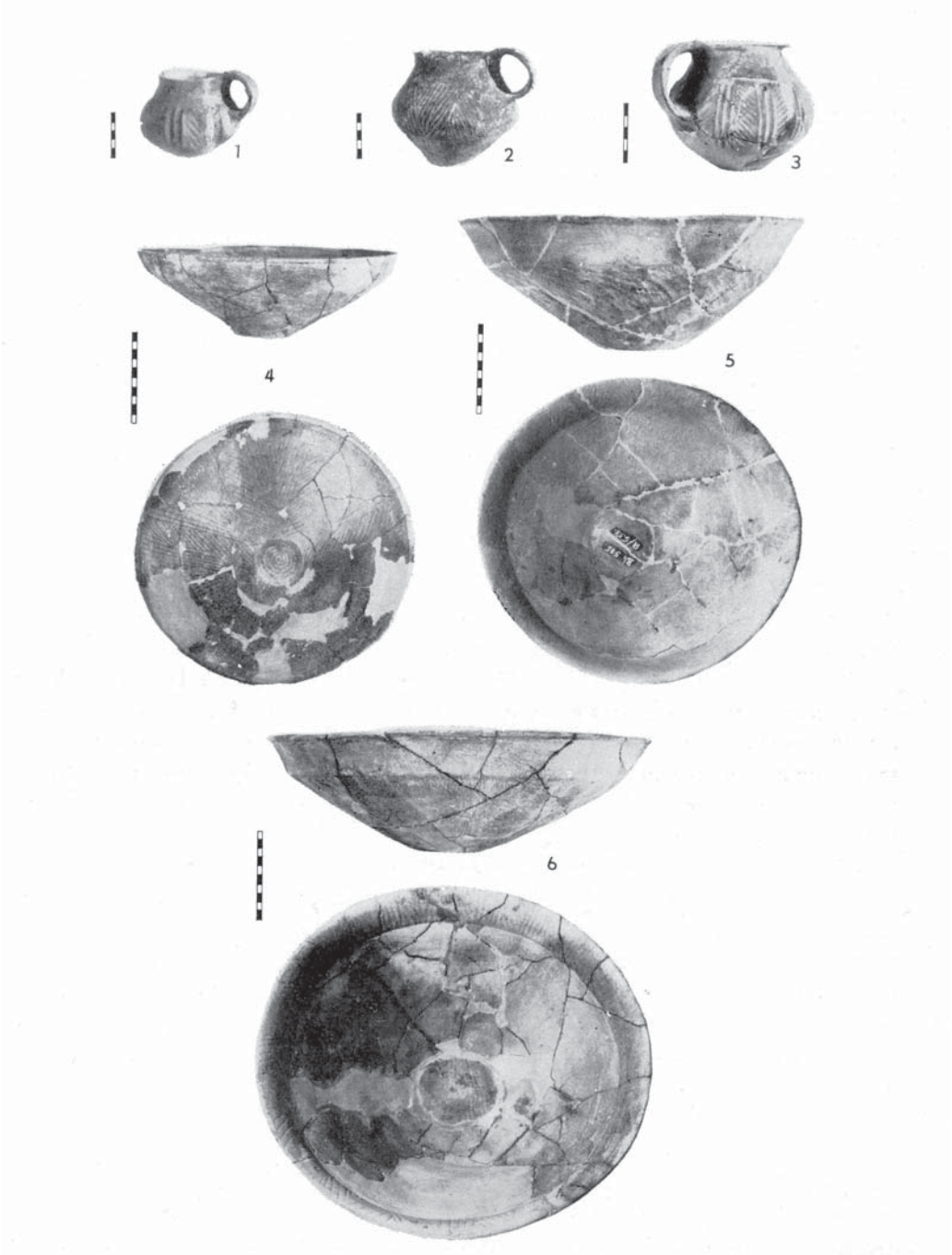


*Figure 3. Pilismarót-Basaharc. Finds from Boleráz graves uncovered during Nándor Fettich's excavation (after* KUTZIÁN *1973, Fig. 2)*

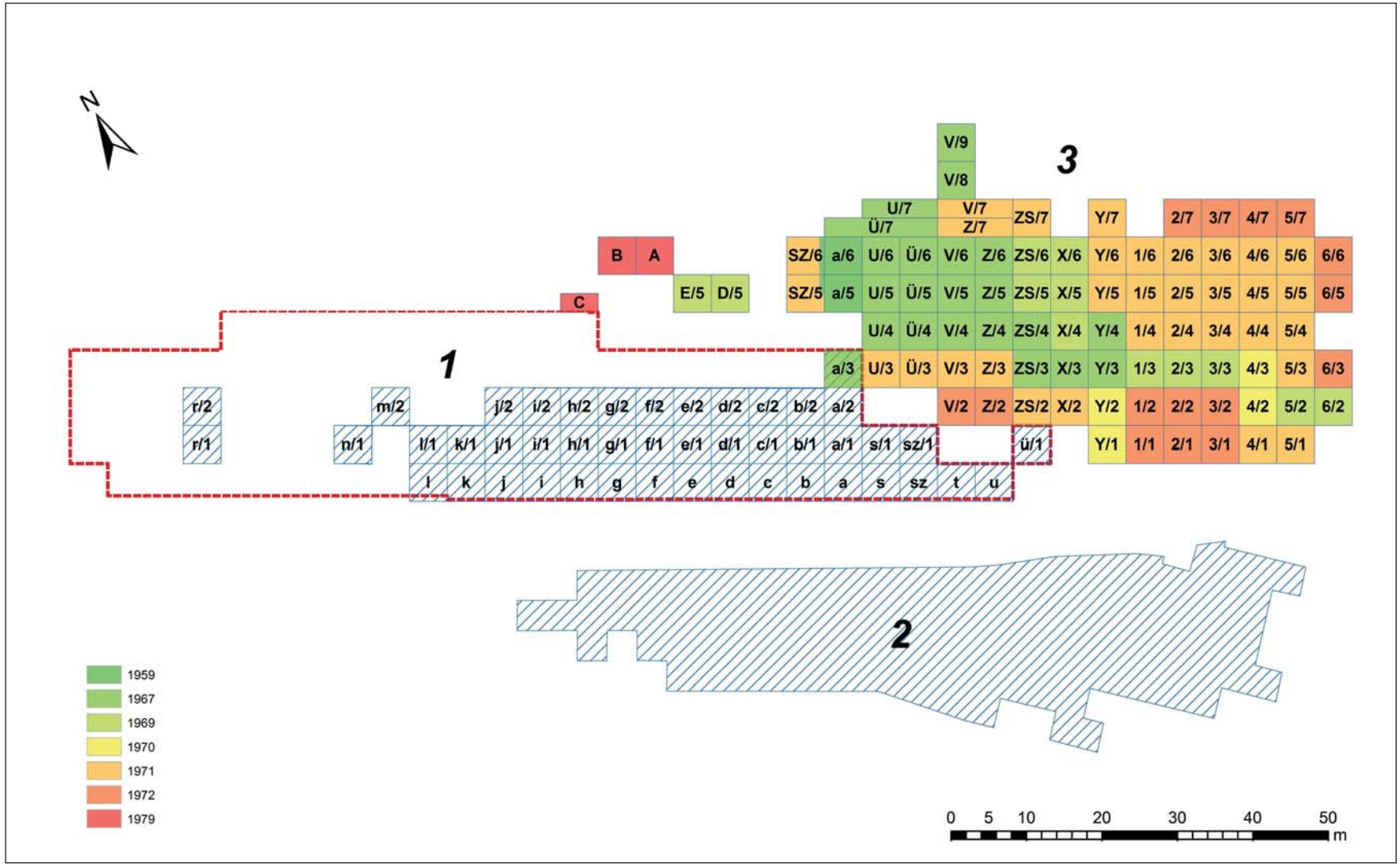


*Figure 4. Pilismarót-Basaharc. 1. Nándor Fettich's numbering of the excavation trenches, 2. the Celtic and Avar cemetery section extending to the other side of the road, 3. the numbering of the excavation trenches in the area of the Copper Age cemetery; Trenches A–C: the area excavated by Ida B. Kutzián (digitisation by Katalin Tolnai)*

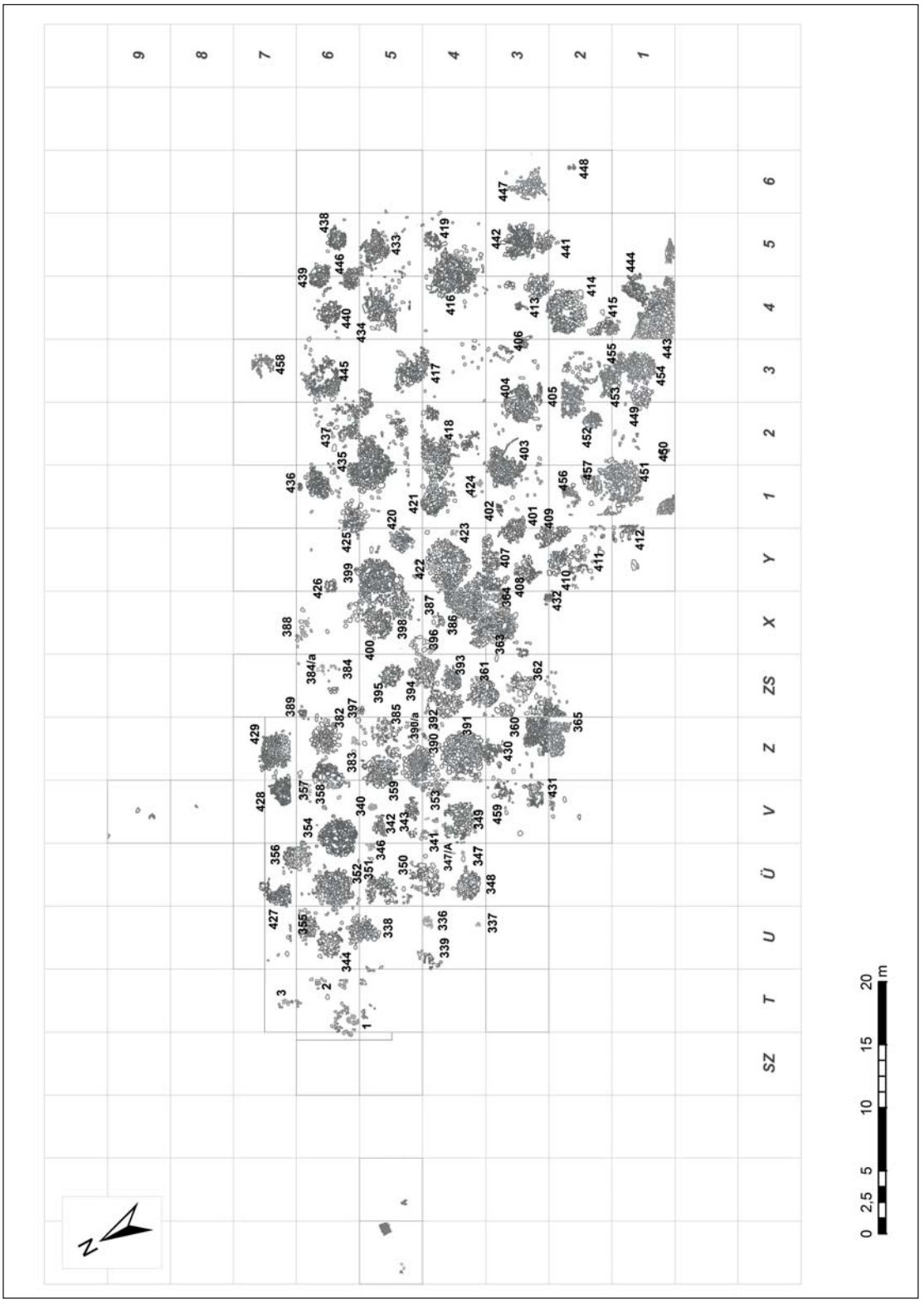


*Figure 5. Pilismarót-Basaharc, István Torma's excavation. The stone-packed graves of the Boleráz culture (drawing by Mária Wolsky, digitisation and complementation with Graves 447–458 by Katalin Tolnai)*

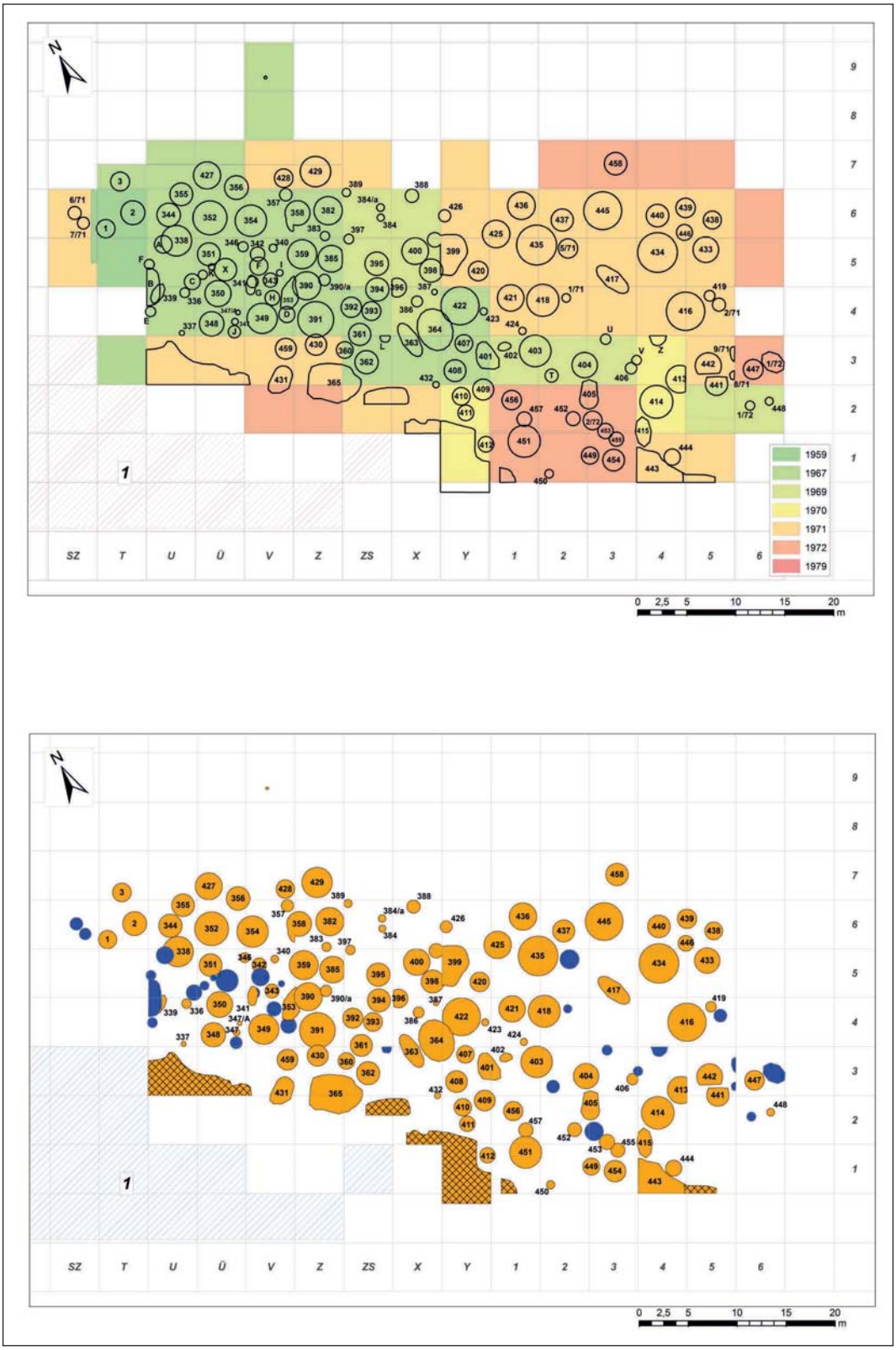


*Figure 6. Pilismarót-Basaharc, István Torma's excavation. 1. Plan of the site showing the areas investigated during successive excavation seasons, 2. Boleráz features are marked with yellow, Celtic features with blue (digitisation by Katalin Tolnai)*

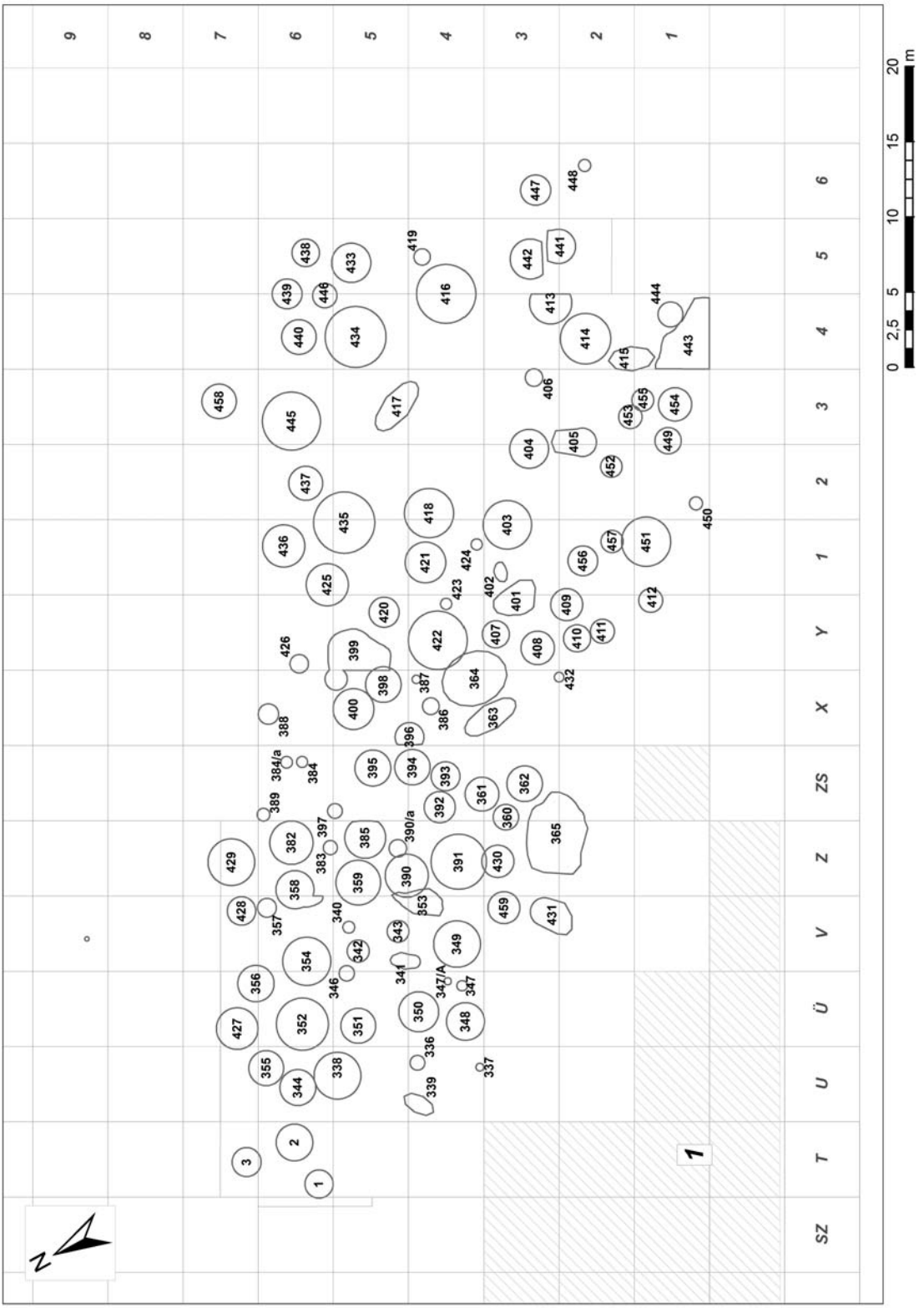


*Figure 7. Pilismarót-Basaharc, István Torma's excavation. Plan of the Copper Age cemetery used in the assessment of the cemetery and for plotting the distribution of various artefact types (digitisation by Katalin Tolnai)*

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4

*Figure 8. Pilismarót-Basaharc. 1. The site in 1959 (after* FETTICH *1959, Taf. I), 2. the site in 1967 (István Torma's photo), 3–4. the site in 2014 (Mária Bondár's photos)*

# II. THE GRAVES

## Introduction

The graves uncovered in the Pilismarót cemetery were not burials that can be described using conventional archaeological categories. The burials were not indicated by the soil mark of their grave pit, but by a stone packing in most cases. These small heaps of stones were generally preserved in their original location, although some stones were dislodged by the action of wind and rain. In most cases, a small hollow had not been scooped out in the ground for the ashes under the stones, suggesting that the ashes and calcined bones had been placed on the ground with the grave offerings arranged around them, as prescribed by the funerary rite. Given the lack of a grave pit, it was often difficult to determine the original floor of the burial – very often, the size and area of the burial was outlined by the grave goods and, more rarely, by the discoloured soil. Owing to this distinctive burial rite, the original dimensions of the burials could rarely be precisely determined.

The description of the graves includes the observations made during their excavation and a list of the grave offerings found in the grave or its immediate proximity. Grave goods are here defined as all the artefacts and objects that had been deposited in or on the grave during the burial ceremony or afterwards. Most of the pottery finds were in a poor state of preservation and extremely crumbly owing to their shallow depth from the topsoil and their exposure to the elements for long millennia. The ceramic finds were badly damaged by post-depositional processes by the time they were unearthed, and, very often, the vessel fragments became even more fragmented after washing. When inventorying the finds, we often found that despite the careful handling and treatment, the number of finds was at variance with what had been recorded in the field diary (sometimes there were more and sometimes fewer artefacts than originally recorded). We encountered the same problem in the case of conserved and restored intact vessels: a few poorly preserved, crumbly vessels simply fell apart after they were photographed.

We made every effort to identify every single artefact based on the excavation drawings, the photos of the finds made every year and the conservation diaries. However, despite our careful review of the grave inventories, a few finds could not be conclusively associated with a particular burial and a few grave goods (mostly pottery sherds) are also missing from the grave inventories. Conversely, a few graves contained more vessel fragments than originally recorded: these had generally been identified during the washing and conservation of the finds.

In some cases, certain types of the grave pottery were assigned to another typological category compared to the initial description in the field diary. The grave descriptions contain the original typological classification, while the ensuing descriptions of the grave goods are based on the ceramic typology as presented in the section discussing the grave goods.

The numbering of the graves and the trenches continued the system begun by Nándor Fettich. A glance at the combined cemetery plan *(Fig. 4.)* reveals that there is a divergence in the case of Trenches sz, t, u and ü between Nándor Fettich and István Torma's chequerboard of excavation trenches.

In order to make the location of individual graves easier, the original grid system is shown on the combined cemetery plan and the coordinates of the trench in which a particular grave was unearthed are included in the grave descriptions: the first element designates the horizontal axis and the second the vertical axis of the grid system, with the grave located at the intersection of the two both on the cemetery plan showing the stone packings *(Fig. 5)* and on the simplified version on which the stone packings are marked with polygons *(Fig. 7)*. The Copper Age burials are marked with ochre, the Celtic features with

blue *(Fig. 6. 2)*, revealing the spatial overlap between the occupation of the site. The coordinates of the grave are followed by a reference to the plate showing the grave photo. Some grave descriptions lack this reference because they were not photographed.

The plates to the catalogue contain the photo of the grave (if one was made) alongside all other available information on a particular grave, including the graphs of the radiocarbon measurements for the burials that had been sampled (for a larger version, see *Fig. 34* on p. 271) as well as the photos and drawings of the grave goods (complete with vessel profiles). We strove to illustrate all the grave goods from the burials, and we therefore included even the small, indistinct pottery fragments from the graves and their immediate surroundings. The material is currently housed in the Balassa Bálint Museum in Esztergom (recently renamed Balassa Bálint Museum of the Hungarian National Museum) and the inventory number of each artefact appearing in the description of the grave goods follows that museum's system. References to previous publications of a particular artefact from the cemetery can be found in the footnotes in order to provide a rough idea of what was earlier known to the archaeological community from this remarkable burial ground.

## Description of Graves 336–459

**Grave 336** (Trench u/4; *Pl. 1*)

The grave lay at a depth of 105 cm. The burial lacked a stone packing; the presence of the grave was indicated by a single stone in the trench. A soil mark indicating the possible presence of a grave pit could not be made out in the brown soil. Found in a circle measuring 1 m in diameter around the ashes deposited in the middle of the grave were five bowls with the mouth downward (5–9) and two small mugs placed over the ashes (1, 4). A jug (2) and a mug (3) were placed by the southern and northern edge of the grave; both had originally been set upright, but were found tilted to one side owing to the weight of the earth. With the exception of one mug (3), the vessels were all broken. One-half of a stone shaft-hole axe (10) with the cutting edge thrust among the ashes lay by the eastern edge of the grave. Another broken stone shaft-hole axe (11) found beside the grave was probably also part of the grave inventory. Two burnt river mussels and a few snails were found among the ashes. The yellow subsoil lay 15–20 cm under the grave. The Boleráz vessel fragments (12–14) lay 30 cm south-west of the grave.

Grave goods

1. Mug.[37] Brownish mug with slightly outturned rim, short neck and squat, globular body. The furrowed strap handle rises above the rim. The body is decorated with faint channelling; the oblique channelling gradually grades into vertical channelling. The vessel body was originally polished, of which only patches survive. Refitted, the rim is chipped. H. 5 cm, dM. 5.5 cm, dB 2.5 cm. Inv. no. 88.12.1 *(Pl. 1. 5)*.
2. Jug.[38] Grey and red mottled jug with slightly outturned rim, conical neck and squat, globular body. The furrowed strap handle barely rises above the rim. Three subcutaneous handles served for suspension. The belly is divided into fields filled with oblique channelling in alternating directions and vertical channelling flanked by bundles of three barely prominent ribs. Two rows of punctates encircle the rim. The vessel body was originally polished, of which only patches survive. Refitted, the handle is restored. H. 10.5 cm, dM. 8.3 cm, dB. 4.5 cm. Inv. no. 88.12.2 *(Pl. 1. 1)*.

[37] Torma 1973, Abb. 3. 3.
[38] Torma 1973, Abb. 3. 4.

3. Mug. Brownish mug with slightly outturned rim, short, vertical neck and squat, globular body. The furrowed strap handle rises above the rim. The belly is decorated with dense vertical channelling. The originally polished surface is strongly worn. Refitted, the lower half is restored. H. 5.5. cm, dM. 6.5–7 cm. Inv. no. 88.12.3 *(Pl. 1. 3)*.
4. Mug. Lower part of a squat, globular mug decorated with sets of three vertical, slender ribs dividing the belly into fields. The neck and the rim are lacking. H. 5.5 cm, dB. 3 cm. Inv. no. 88.12.4 *(Pl. 1. 6)*.
5. Bowl.[39] Conical bowl decorated with flat, round knobs on the shoulder (originally there had probably been eight knobs). The interior is plain. Reddish, with grey mottling. Refitted and restored. H. 4.5 cm, dB 6 cm. Inv. no. 88.12.5 *(Pl. 1. 8)*.
6. Bowl. Conical bowl with short, funnel-like neck, the lower part is incurved on one side. The lower part is coarsened on the exterior and bears oblique finger-drawn furrows, the interior is plain. H. 7 cm, dM. 21.7 cm, dB. 6 cm. Inv. no. 88.12.6 *(Pl. 1. 9)*.
7. Bowl. Semi-spherical, asymmetrical bowl with thickened rim, decorated with a flat, round knob on the shoulder. Refitted and largely restored. H. 7 cm, dM. 21.5 cm, dB. 6.7 cm. Inv. no. 88.12.7 *(Pl. 1. 12)*.
8. Bowl. Semi-spherical bowl with flat rim. A barely visible groove runs under the rim. The interior is plain. Reddish-brown with grey mottling, the surface is strongly worn. H. 7 cm, dM. 30 cm, dB. 8.5 cm. Inv. no. 88.12.8 *(Pl. 1. 10)*.
9. Bowl. Semi-spherical bowl with flat rim, decorated with channelling-like impressions. The exterior is coarsened, the interior is decorated with a strongly worn, zig-zag-like channelling without any apparent system. Oblique channelling encircles the rim interior. The interior is strongly worn and the design can only be reconstructed in drawing. Refitted, the base is restored. H. 9 cm, dM. 33 cm, dB. 9 cm. Inv. no. 88.12.9 *(Pl. 1. 11)*.
10. Stone axe. Shaft-hole axe with traces of use-wear, refitted from several fragments. L. 9 cm, W. 6.2 cm, Th. 4.7 cm, diam. of borehole 2.4 cm. Inv. no. 88.12.11 *(Pl. 1. 7)*.
11. Stone axe. Butt fragment with a portion of the shaft-hole of a stone axe. L. 4.9 cm, W. 5.5 cm. Th. 2.3 cm. Inv. no. 88.12.12 *(Pl. 1. 4)*.

12–14. Vessel fragments.[40] Two body fragments of a reddish-brown jug decorated with vertical and oblique channelling and vertically set, inward thickening subcutaneous handles. 4.6 x 4.6 cm, 4.1 x 3.8 cm. Inv. no. 88.12.10 *(Pl. 1. 2)*.

**Grave 337** (Trench u/4)[41]

The grave lay at a depth of 100 cm. The burial lacked a stone packing and neither could a soil mark indicating the possible presence of a grave pit be identified in the brown soil. The few calcined bones, two snails, a river mussel and a burnt, 3–4 cm long lump of limestone were covered by a larger bowl (1), beside which lay the fragments of a crushed jug (2), which had originally been set upright. Both vessels were already fragmentary when deposited in the grave: the bowl lacked its upper part, the jug its lower half.

[39] Torma 1973, Abb. 2. 2.
[40] Only two of the three vessel fragments were inventoried.
[41] Erroneously described as Grave 335 in the field diary.

Grave goods

1. Bowl. Body and base fragments of a larger, plain, probably funnel-necked bowl. The reddish surface is strongly worn. Refitted from five fragments. dB. 9 cm. Inv. no. 88.13.1 *(Pl. 3. 8)*.
2. Jug. Rim and body fragments of a grey, thin-walled jug with short, incurving neck and biconical body with worn surface. The body is decorated with alternating vertical and oblique channelling. Eleven fragments. Inv. no. 88.13.2 *(Pl. 3. 7)*.

**Grave 338** (Trenches u/5–u/6; *Pl. 2*)

The western half of the grave's roughly circular stone packing measuring 2.5 m in diameter was destroyed when Pit "A", a Celtic feature, was dug. Several stones had fallen into the Celtic pit; these lay at various depths in the fill together with channelled bowl fragments (9–10) and a mug fragment with a subcutaneous handle (8) from the Copper Age grave.

After the removal of the stone packing, several broken vessels were found lying 15–20 cm apart immediately underneath the stones. A channelled mug (1) lay under the middle of the packing, alongside four or five bowls deposited with their mouth downward (2–6) and a pot broken into several pieces (7). A few calcined bone fragments lay beside and under two bowls (nos 2 and 4), at a depth of 135 cm. The bowls (nos 4 and 5) by the edge of Pit "A", a Celtic feature, were dislodged when the wall of the pit collapsed and there was a difference of 20 cm between the sherds from the vessels' upper and lower part. A river mussel was found under one of the bowls (no. 4). The fragments of two other bowls (9–10) lay by the edge of the grave, separate from the other finds.

Grave goods

1. Mug. Greyish-yellow mug with slightly outturned rim, short, cylindrical neck and squat, globular body, which was originally polished. The vessel body is divided into fields filled with oblique channelling in alternating directions flanked by barely prominent, vertical triple ribs. The rim is chipped, the handle is refitted. H. 5.8 cm, dM. 5.5 cm, dB. 2.2 cm. Inv. no. 88.14.1 *(Pl. 2. 3)*.
2. Bowl. Six fragments of a large, brownish-red, semi-spherical bowl. The exterior is coarsened, the rim is covered with densely spaced, short, vertical stabs. The interior is plain. The surface is strongly worn. The bowl fell apart after it was photographed. dB. 11 cm. Inv. no. 88.14.2 *(Pl. 2. 10)*.
3. Bowl. Four fragments of a large, thin-walled, probably funnel-necked bowl. The plain brownish vessel has a strongly worn surface. Inv. no. 88.14.3 *(Pl. 2. 2)*.
4. Bowl. Rim, body and base fragments of a bowl with short funnel neck. The lower part of the body is coarsened. The rim interior is decorated with light channelling. The surface is strongly worn. Nine fragments (the bowl fell apart after it was photographed). dM. 26 cm, dB. *ca*. 6.5–7 cm. Inv. no. 88.14.4 *(Pl. 2. 5)*.
5. Bowl. Rim fragments of a brownish-grey, red mottled, semi-spherical bowl with short, slightly swollen, flattish rim. The rim is covered with dense, vertical channelling, the vessel interior is covered with oblique channelling in alternating directions. A few patches of the original polishing survive on the body. The exterior was coarsened; it is now strongly worn. Refitted. dM. 43 cm. Six fragments. Inv. no. 88.14.5 *(Pl. 2. 1)*.
6. Amphora. Rim and body fragments of a reddish-brown, thin-walled amphora. A pair of grooved cordons encircles the neck and small string-hole lugs are set on the belly. The surface is strongly worn. Refitted. Eight fragments. dM. *ca.* 17 cm. Inv. no. 88.14.6 *(Pl. 2. 8)*.
7. Pot. Six rim fragments of a greyish-brown biconical pot with short, slightly incurving neck. Two fragments have a handle resembling an unperforated string-hole lug springing from the rim. The

vessel is decorated with a row of dense stabs and a densely grooved cordon under the rim. Refitted and restored. dM. 31 cm. Inv. no. 88.14.7 *(Pl. 2. 7)*.

8. Jug. Biconical jug with short, cylindrical neck and three vertically set subcutaneous handles. The body is divided into fields filled with oblique channelling in alternating directions arranged into opposing triangles, each field flanked by a slender, vertical rib. Refitted and largely restored. Found by the edge of the grave, in a secondary position. H. 14 cm, dM. 12.4 cm, dB. 5 cm. Inv. no. 88.14.8 *(Pl. 2. 6)*.
9. Bowl. Rim and body fragments of a brownish-red bowl with slightly thickened rim and short funnel neck. The shoulder is encircled by a row of dense stabs on the exterior. The rim interior is decorated with short, wide channelling and oblique channelling in alternating directions arranged in a triangle pattern. The base is divided into four triangles filled with channelling. The originally polished surface is strongly worn. Five fragments. H. 9 cm, dM. 29 cm, dB. 8 cm. Inv. no. 88.14.9 *(Pl. 2. 9)*.
10. Bowl. Rim, body and base fragments of a brownish, grey mottled bowl with slightly outturned rim and short funnel neck. The exterior is plain, the rim interior is decorated with a densely spaced, short channelling. Six fragments. Refitted. dM. 23 cm, dB. 12 cm. Inv. no. 88.14.10 *(Pl. 2. 4)*.

**Grave 339** (Trenches u/4–u/5; *Pl. 3*)

Boleráz pottery sherds (6) came to light from under the stones lying under Pit "B", a feature containing Celtic sherds and large stones found at a depth of 180 cm, which extended into the largely unexcavated Trench a/3.[42]

Fragments of various bowls (1–4) and a mug (5) were found under the larger stones lying at a depth of 160–180 cm in the section of the burial falling into Trench u/4. The stones did not form a regular packing. The floor of the burial was slightly sunk into the yellowish subsoil. No calcined bones were found in the excavated grave section.

Grave goods

1. Bowl. Fragment of a light brown, grey mottled, conical bowl with short funnel neck. A row of punctates encircles the shoulder, underneath which the vessel body is coarsened. The rim interior bears a design of triangles filled with oblique channelling in alternating directions. Remains of a red slip survive in some spots. Refitted from several fragments. dM. *ca.* 37 cm. Inv. no. 88.15.2 *(Pl. 3. 1)*.
2. Bowl. Rim and body fragments of an originally polished, reddish bowl with short funnel neck. Two small knobs are set on the shoulder. The rim interior is decorated with zig-zag channelling. The vessel exterior is coarsened. dM. *ca.* 38 cm. Inv. no. 88.15.1 *(Pl. 3. 2)*.
3. Bowl. Rim fragments of a semi-spherical bowl with flat rim decorated with densely set short channelling. The exterior is coarsened, the interior was originally polished. Four fragments. dM. *ca.* 29 cm. Inv. no. 88.15.3 *(Pl. 3. 6)*.
4. Bowl. Rim, body and base fragments of a semi-spherical bowl with flat rim. The exterior is plain, the interior is decorated with channelling arranged in a herringbone-like pattern, the base with wide circular channelling. The originally polished surface is strongly worn. Eight fragments. dM. *ca*. 25 cm, dB. 8 cm. Inv. no. 88.15.4 *(Pl. 3. 3)*.
5. Mug. Rim and neck fragments of a light brown, plain mug with curved, outturned rim. Two fragments. 2.6 cm x 2.1 cm, 3 cm x 2.8 cm, dM. *ca.* 16 cm. Inv. no. 88.15.5 *(Pl. 3. 4)*.

[42] In Fettich's trench system, this area was marked as Trench a/3 (see *Fig. 4* on p. 22).

6. Pot. Rim and body fragments of a brownish pot with short, cylindrical neck, decorated with a pair of grooved cordons under the rim. The surface is strongly worn. Three fragments. dM. *ca.* 28 cm. Inv. no. 88.15.6 *(Pl. 3. 5)*.

**Grave 340** (Trench v/5; *Pl. 4*)

The grave lay 2.5 m from the trench's eastern corner. It lacked a stone packing. The grave goods of the burial lying at a depth of 135 cm had been deposited in one spot measuring 0.5–0.6 m in diameter: a channelled mug (1) with the mouth downward, four bowls (2–3, 5–6), in part placed one on the other, fragments of another channelled mug (4), a stone axe broken in two (7), two snails, two mussels and a few burnt stones. A single small calcined bone was found in the grave.

Grave goods

1. Mug. Grey mug with originally polished surface. The body is divided into fields filled with oblique channelling in alternating directions separated by six bundles of three ribs. Intact, with cracks in several spots. H. 5.9 cm, dM. 5.6 cm, dB. 3 cm. Inv. no. 88.16.1 *(Pl. 4. 1)*.
2. Bowl. Reddish-brown, conical bowl with short, funnel-shaped neck. The interior is plain, the exterior is coarsened obliquely from the shoulder downward. Refitted and restored. The bowl fell apart after it was photographed. H. 12 cm, dM. 30 cm, dB. 9.2 cm. Inv. no. 88.16.2 *(Pl. 4. 6)*.
3. Bowl. Wide-mouthed, semi-spherical bowl with asymmetric sides. The flat rim is decorated with dense channelling. Running under the rim is a straight line, deepened in some spots. The surface is strongly worn. The base is missing. Refitted and restored. The bowl fell apart after it was photographed. dM. 36 cm. Inv. no. 88.16.3 *(Pl. 4. 5)*.
4. Mug. Body fragments of a mug with short, cylindrical neck and squat, globular body, decorated with pronounced vertical channelling between symmetrically set slender ribs and light oblique channelling in two adjacent bands. The vessel body was originally polished. Two fragments. 4.2 x 5.5 cm, 4.6 x 3.4 cm. Inv. no. 88.16.4 *(Pl. 4. 4)*.
5. Bowl. Rim, body and base fragments of a funnel-necked bowl. The exterior is plain, the interior is decorated with barely visible, worn channelling. The surface is strongly worn. Three fragments. 4.4 x 5 cm, 6 x 4.9 cm, 7.5 x 4.5 cm, dM. *ca.* 43, dB. 10.5 cm. Inv. no. 88.16.5 *(Pl. 4. 7-8)*.
6. Bowl.[43] Conical bowl with short funnel neck. A row of stabs encircles the shoulder, interrupted in one spot by a pair of small knobs. The rim interior is decorated with dense vertical channelling. The surface is strongly worn. H. 6.5 cm, dM. 23.6 cm, dB. 6 cm. Inv. no. 88.16.6 *(Pl. 4. 3)*.
7. Stone axe. Trapezoidal shaft-hole axe, broken in two, with a mismade, incomplete boring. Refitted. L. 8.2 cm, W. 5.7 cm, Th. 2.4 cm, diam. of borehole 2.2 cm. Inv. no. 88.16.7 *(Pl. 4. 2)*.

**Grave 341** (Trenches v/4–v/5)

The burial was indicated by a small stone packing over an 80 cm by 80 cm large area at a depth of 105 cm, some 50–80 cm from the western corner of Trench v/5. A broken conical bowl (1) lay among the stones. The stone packing extended into Trench v/4. After the lifting of the stones, a round soil mark with a diameter of *ca*. 100 cm became visible at a depth of 115–120 cm. The yellow soil mark of the pit contrasted sharply with the brown subsoil. Fragments of a bowl (2) set upside down west of the grave pit came to light under the stones, beside which lay a handle fragment (4) whose association with the

[43] TORMA 1973, Abb. 2. 5.

burial is dubious. A cup (3) turned upside down lay under the bowl. A few pebbles and snails, and a river mussel were found under the vessels.

Grave goods

1. Bowl. Broken conical bowl,[44] which can no longer be found.
2. Bowl. Dark grey semi-spherical bowl with a horizontal groove under the rim in some spots. The body was originally polished. Refitted and restored. H. 8.5 cm, dM. 22.7 cm, dB. 7.5 cm. Inv. no. 88.17.3 *(Pl. 4. 11)*.
3. Cup.[45] Wide-mouthed cup with very short neck and strongly squat, globular body, decorated with light vertical channelling from the shoulder downward. The body was originally polished. Refitted and restored; the base is missing. H. *ca.* 5 cm, dM. *ca.* 9 cm. Inv. no. 88.17.2 *(Pl. 4. 10)*.
4. Handle. Fragment of a brownish-red handle from a large storage jar. Refitted. 7.9 x 3.4 cm. Inv. no. 88.17.4 *(Pl. 4. 9)*.

**Grave 342** (Trench v/5; *Pl. 4*)

The grave came to light under Pit "F", uncovered in the middle of Trench v/5. The reddish-brown soil mark of the grave could be easily distinguished from the surrounding yellowish-grey subsoil. The pit's soil mark extended under the stone packing of Grave 342. A stone structure made up of a perforated and a vertical stone slab was found in the pit's eastern half. The homogeneous fill of the cylindrical pit with slightly inward slanting walls and flat floor contained a few specks of charcoal and a handful of indistinct Celtic pottery sherds. The depth of the pit was 160 cm. The seemingly "inverted" chronology of the features (a Celtic pit underlying a Copper Age burial) can be explained as follows: The upper part of the Celtic pit was probably bell-shaped and the stone packing of the Copper Age burial was most likely dislodged when the walls of the pit collapsed, and thus the western side lay lower.

The greater part of the grave's stone packing was removed when Pit "F" was dug. The pit destroyed much of the grave. The surviving (smaller) part of the stone packing measured 1.7 x 0.8 m.

The ashes deposited on the ground formed a small heap at a depth of 130 cm from the modern surface. A larger mussel lay beside the ashes and a smaller one among the ashes. Five other mussels were also found in the grave, alongside 4–5 smaller pottery sherds (1).

Grave goods

1. Vessel fragments (which can no longer be found).

**Grave 343** (Trench v/5; *Pl. 5*)

The ashes were placed in a semi-spherical bowl (1) in the grave lying at a depth of 135 cm under the irregular stone packing measuring 2 m by 1.2 m. The ashes spilled out of the bowl crushed by the weight of the stones. Lying beside the bowl were a river mussel and a burnt stone from the pyre. The other grave goods were a mug with string-hole lugs (2) and a bowl broken into several fragments (3). The latter two vessels were probably already broken at the time of their deposition.

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[44] The bowl fragments from Grave 350 lying adjacent to this grave may have been part of the grave inventory of this burial.

[45] Torma 1973, Abb. 3. 7.

Grave goods

1. Bowl. Bowl with plain exterior and interior, save for the horizontal groove under the rim in some spots. The surface is strongly worn, the base is incomplete. Refitted and restored. It fell apart after it was photographed. H. 7 cm, dM. 18 cm. Inv. no. 88.19.1 *(Pl. 5. 1)*.
2. Mug.[46] Mug with outturned rim, short, cylindrical neck and squat, globular body. The furrowed strap handle rises slightly above the rim. Three symmetrically set, vertically perforated subcutaneous handles divide the vessel body into fields separated by finely smoothed channelling and slender, rib-like protrusions. Refitted and restored. H. 8 cm, dM. 7.5 cm. Inv. no. 88.19.2 *(Pl. 5. 2)*.
3. Bowl. Rim and body fragments of a reddish-brown, grey mottled conical bowl with short funnel neck. The exterior is plain, the rim interior is decorated with oblique channelling in alternating directions arranged in a triangle pattern. The originally polished surface is strongly worn. Four fragments. dM. *ca*. 27 cm. Inv. no. 88.19.3 *(Pl. 5. 3)*.

**Grave 344** (Trench u/6; *Pl. 5*)

Seven larger stones enclosed a roughly 1 m by 0.8 m large area in the middle of the stone packing covering a round area with a diameter of 2 m. The oval area enclosed by the larger stones under the carefully constructed stone packing contained a jug (1) tilted to one side, a bowl (2) deposited with its mouth downward (only one-half of this vessel was placed in the grave) and a pot (3), also with the mouth downward. The grave also yielded a mussel and a few snails, but did not contain a single calcined bone. The vessels lay on the brownish, humic ground. The undisturbed subsoil lay at a depth of 160 cm, about a spade-spit deeper than the grave.

Grave goods

1. Mug.[47] Mug with short, cylindrical neck and squat, globular body. The furrowed strap handle rises above the rim. Two bundles of three slender ribs divide the vessel body into fields separated by fine oblique channelling and symmetrically placed, slender, rib-like protrusions. The surface is strongly worn. H. 7.5 cm, dM. 7-8.2 cm, dB. 3.7 cm. Inv. no. 88.20.1 *(Pl. 5. 5)*.
2. Bowl. Rim, body and base fragments of a grey conical bowl with grooving on the rim. The surface is strongly worn. It fell apart after it was photographed. H. 12 cm, dM. *ca*. 36 cm, dB. 9 cm. Inv. no. 88.20.2 *(Pl. 5. 6)*.
3. Pot.[48] Conical pot, decorated with a row of stabs under the rim and two unperforated knobs set on the rim. The surface is strongly worn. Refitted and restored. H. 11 cm, dM. 13.8 cm, dB. 6.5 cm. Inv. no. 88.20.3 *(Pl. 5. 4)*.

(**Grave 345**)

This number was accidentally omitted from the sequence of the grave numbering.

**Grave 346** (Trenches ü/5–v/5; *Pl. 6*)

The grave lay at a depth of 120 cm in the eastern corner of Trench ü/5, extending in part under the trench wall. The burial lacked a stone packing. The ashes were deposited on the ground and covered

[46] TORMA 1973, Abb. 3. 8.
[47] TORMA 1973, Abb. 3. 5.
[48] TORMA 1973, Abb. 3. 1.

with a bowl (2) at a depth of 120 cm. Another bowl (1) was placed beside it, similarly with the mouth downward. The base of a third vessel (3) was found underneath the two vessels. Other finds from the burial were three mussels and a snail, and an obsidian blade (4) came to light when the fill of the grave was turned over.

Grave goods

1. Bowl. Large funnel-necked bowl decorated with four pairs of two small round knobs in an arrangement of two pairs set beside each other on the exterior and with alternating vertical and oblique channelling on the rim interior. The base interior bears a pattern of four triangles filled with channelling touching at the tips. The bowl was originally polished and patches of a red slip survive on the exterior. Refitted from several fragments and restored. H. 12.5 cm, dM. 36 cm, dB. 12 cm. Inv. no. 88.21.1 *(Pl. 6. 4)*.
2. Bowl. Fragments of a large semi-spherical bowl decorated with dense vertical channelling on the rim and a groove under the rim. The base interior is covered with grooved concentric circles. The surface is strongly worn. Refitted and restored. Five fragments (the vessel fell apart after it was photographed). L. of fragment 8 cm, dM. 34 cm. Inv. no. 88.21.2 *(Pl. 6. 1)*.
3. Pot. Rim, body and base fragments of a grey, poorly preserved, thick-walled pot with worn surface. Seven fragments. dB. 9.5 cm. Inv. no. 88.21.3 *(Pl. 6. 3)*.
4. Obsidian blade. Grey obsidian micro-blade. L. 1.7 cm, W. 0.4 cm. Inv. no. 88.21.4 *(Pl. 6. 2)*.

**Grave 347** (Trench ü/4; *Pl. 3*)

The grave was indicated by the ashes found under a bowl (1) turned upside down lying under two stones beside Pit "J", a Celtic feature near the trench's southern corner. The fragments of another vessel, perhaps a pot (2), were recovered from the grave. A mussel lay beside each vessel. A third vessel (3), originally set upright, came to light when the bowl was lifted. A part of the calcined bones had been deposited in this vessel.

Grave goods

1. Bowl. Plain bowl with slightly curved rim, short funnel neck, profiled base and symmetric sides. The surface is strongly worn. Refitted from several fragments and restored. H. 5.3 cm, dM. 15 cm, dB. 5.8 cm. Inv. no. 88.22.1 *(Pl. 3. 9)*.
2. Pot. Body and base fragments of a large reddish-brown pot with coarsened surface. Nine fragments, of which two larger ones are refitted from smaller ones. L. of fragment 7.8 cm, dB. 14 cm. Inv. no. 88.22.2 *(Pl. 3. 10)*.
3. Pot. Rim, body and base fragments of a thin-walled, conical pot with slightly outturned rim, decorated with a row of punctates under the rim. The surface is strongly worn. Three fragments. Inv. no. 88.22.3 *(Pl. 3. 11)*.

**Grave 347/a** (Trench ü/4)

The body and base fragments of a Copper Age pot (1) lay at a depth of 110 cm by the north-western end of the stone packing of Grave 349 in Trench v/4, in line with the base of the stones. The body fragments of a vessel with appliqué decoration (2) were found to their left, in Trench ü/4. A few calcined bone fragments lay under the pottery sherds. The grave goods can no longer be found.

Grave goods
1. Pot fragments.
2. Fragments of a vessel with appliqué decoration.

**Grave 348** (Trench ü/4; *Pl. 5*)

The stone packing, which also included a few larger stones, covered a roughly 2.1 m by 1.8 m large area. After lifting the packing, weakly burnt calcined bone fragments were found lying over a 40 cm by 40 cm large patch under the middle of the stone packing, at a depth of 100–110 cm. The smaller and larger calcined bone fragments weighed *ca*. 1 kg. The bones were deposited on the ground; the fragments towards the slope lay some 5–10 cm deeper. The burial was not accompanied by vessels. The fragments of a broken bowl (1) and of a pot (2) were found some 80–100 cm away from the ashes, at the same depth.

Grave goods
1. Bowl. Fragments of a large semi-spherical bowl with flat rim and slightly raised base interior. The rim is decorated with dense vertical channelling. The originally polished surface is strongly worn. Refitted and restored. Seven fragments. H. 9 cm, dM. 32 cm, dB. 9 cm. Inv. no. 88.24.1 *(Pl. 5. 7)*.
2. Pot. Body and base fragments of a brownish-grey, strongly worn pot. Refitted, the base is incomplete. Six fragments. dB. 9 cm. Inv. no. 88.24.4 *(Pl. 5. 10)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

3. Mug. Body fragment of a small mug with the stub of the handle. The surface is strongly worn. 3.3 x 3.2 cm. Inv. no. 88.24.2 *(Pl. 5. 11)*
4. Bowl. Rim and body fragments of a conical bowl with short funnel neck and a sharp shoulder carination. The surface is strongly worn, Seven fragments. Inv. no. 88.24.3 *(Pl. 5. 12)*.
5. Mug. Body fragment of a mug decorated with wide vertical channelling on the belly. 2.4 x 1.5 cm. Inv. no. 88.24.5 *(Pl. 5. 9)*
6. Body fragment of a greyish, thin-walled vessel decorated with parallel incised lines. The surface is worn. 2.9 x 2.7 cm. Inv. no. 88.24.6 *(Pl. 5. 8)*

**Grave 349** (Trench v/4; *Pl. 6*)

The roughly 3 m by 2 m large round stone packing with 5–7 larger stones in the middle enclosed an area with a diameter of *ca*. 1.8 m. The stones were missing from the eastern edge along a U-shaped section; the reason for this gap and its date are not known. No more than a few calcined bones and the small fragments of a bowl (1) were found under the stones, and the fragments of a pot (2) lying 60 cm east of the bones.

Grave goods
1. Bowl. Fragments of a large, plain, funnel-necked bowl with strongly worn surface. The bowl was refitted, but fell apart. Thirteen fragments. H. 11 cm, dM. *ca.* 44 cm. Inv. no. 88.25.1 *(Pl. 6. 6)*.
2. Pot. Body and base fragments of a large, thick-walled pot with coarsened surface. Six fragments. dB. *ca*. 16 cm. Inv. no. 88.25.2 *(Pl. 6. 7)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

3. Pot. Rim and body fragments of a small, reddish-brown, handled pot with strongly worn surface. Three fragments, one refitted from smaller pieces. Inv. no. 88.25.3 *(Pl. 6. 5)*.
4. Bowl. Rim and body fragments of a grey, thin-walled, biconical bowl (?) with slightly outturned rim. Three fragments. Inv. no. 88.25.4 *(Pl. 6. 11)*.
5. Bowl. Body fragments of a reddish-brown bowl with strongly worn surface. Three fragments. Inv. no. 88.25.5 *(Pl. 6. 10)*.
6. Bowl. Rim and body fragments of a strongly worn, plain bowl with outturned rim. Two fragments. 3.2 x 4.1 cm, 3 x 2.8 cm. Inv. no. 88.25.6 *(Pl. 6. 8)*.
7. Jug. Rim fragment of a reddish-brown, conical jug with slightly curved rim and short, cylindrical neck. 2.6 x 4.5 cm. Inv. no. 88.25.7 *(Pl. 6. 9)*.

**Grave 350** (Trenches ü/4–ü/5; *Pl. 7*)

The burial lay on the boundary of Trenches ü/4 and ü/5. A part of the stone packing of very large stones covering an area with a diameter of 2.5–3 m was disturbed by the Celts: the eastern edge of the stone packing was dislodged owing to a Celtic feature (Pit "K"). The calcined bones lay under the middle of the stone packing. The bones were covered with a bowl (1). The grave contained a broken vessel (2) and a river mussel. Both vessels were broken at the time of their deposition.

Grave goods

1. Bowl. Rim and body fragments of a strongly worn, conical bowl with short funnel neck. The exterior is plain, the rim interior is decorated with dense vertical channelling. Seven fragments. Inv. no. 88.26.1 *(Pl. 7. 3)*.
2. Amphora. Body and base fragments of a large, plain, reddish-brown, grey mottled, thick-walled storage jar. The surface is strongly worn. Seventeen fragments. dB. *ca.* 16 cm. Inv. no. 88.26.2 *(Pl. 7. 4)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:[49]

3. Bowl. Body fragment of a large bowl. The exterior is coarsened, the belly interior is decorated with fields filled with horizontal channelling separated by vertical grooves. The surface is strongly worn. 7.7 x 6.2 cm. Inv. no. 88.26.3 *(Pl. 7. 1)*.
4. Bowl. Rim fragment of a worn, reddish-brown, thin-walled bowl with short funnel neck. Worn traces of channelling can be made out on the rim interior. 7.9 x 3.7 cm. Inv. no. 88.26.4 *(Pl. 7. 2)*.

**Grave 351** (Trench ü/5; *Pl. 8*)

The burial lay under an irregularly shaped stone packing of 2.5 m by 2 m. The pottery sherds from the vessels crushed by the stones lay scattered under the packing. A pot (1) was found on the eastern side of the grave and a bowl (2) to its west. Other grave goods were the rim sherds of a bowl (3) and two other bowls (4–5) judging from the pottery fragments. The vessels lay at a depth of 125 cm. There were

[49] It is possible that these fragments were part of the grave goods of Grave 431 lying adjacent to this burial.

no calcined bones. Several other pottery fragments (6–17) were found by the western edge of the stone packing.

Grave goods

1. Amphora. Body fragments of a large, reddish-brown, thick-walled amphora with coarsened surface and a furrowed strap handle on the belly, from the vessel body near the base. Refitted and restored. Six fragments. Diam. of belly 37 cm. Inv. no. 88.27.1 *(Pl. 8. 2)*.
2. Bowl. Funnel-necked bowl with coarsened lower half and worn interior. The originally polished surface is strongly worn. Refitted and restored. H. 12 cm, dM. 35.5 cm, dB. 9 cm. Inv. no. 88.27.2 *(Pl. 8. 5)*.
3. Bowl. Rim, body and base fragments of a grey, semi-spherical bowl. The plain bowl is strongly worn. Refitted. 20 x 18.5 cm. Inv. no. 88.27.3 *(Pl. 9. 10)*.
4. Bowl. Rim and body fragments of a brick-red, funnel-necked bowl, decorated with fields filled alternately with vertical and oblique channelling. The originally polished surface is strongly worn. Refitted. Four fragments. L. 10.7 cm, dM. 34 cm. Inv. no. 88.27.4 *(Pl. 8. 1)*.
5. Bowl. Rim, body and base fragments of a reddish-brown, funnel-necked, conical bowl decorated with a pair of small flat knobs on the shoulder, vertical channelling on the rim interior and a pattern of four fields filled with vertical and horizontal channelling on the base interior. Refitted. H. 9 cm, L. of rim 14.5 cm. Inv. no. 88.27.5 *(Pl. 8. 3)*.
6. Bowl. Fragments of a large, reddish, funnel-necked, conical bowl with originally polished surface. The exterior is coarsened, the rim interior is covered with pronounced channelling. Both fragments refitted from several smaller ones. 15.8 x 16.2 cm, 15.2 x 14 cm. dM. *ca.* 50 cm. Inv. no. 88.27.6 *(Pl. 8. 4)*.
7. Breast pot.[50] Rim, body and base fragments of a small, brick-coloured, thin-walled amphora, decorated with a double (?) grooved cordon around the shoulder, a pointed, solid knob (probably one of a pair) underneath and two semi-circular grooved ribs, one around each knob symbolising female breasts. Six fragments. Inv. no. 88.27.7 *(Pl. 9. 1)*.
8. Bowl. Rim, body and base fragments of a reddish-brown, funnel-necked, thick-walled bowl with coarsened surface. The surface is strongly worn. Seven fragments. dM. 36 cm. Inv. no. 88.27.8 *(Pl. 9. 8)*.
9. Bowl. Rim fragments of a small, light brown, semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim. The surface is strongly worn. Refitted. Two fragments. 9 x 7.4 cm, 4.5 x 4. cm. Inv. no. 88.27.9 *(Pl. 9. 7)*.
10. Bowl. Rim fragments of a large, greyish, funnel-necked bowl decorated with wide, faint channelling on the rim interior. The surface is strongly worn. Four fragments. Inv. no. 88.27.10 *(Pl. 8. 7)*.
11. Bowl. Rim fragment of a small grey bowl with slightly swollen, flattish rim, decorated with dense vertical channelling on the rim. Refitted. 3.9 x 1.5 cm. Inv. no. 88.27.11 *(Pl. 9. 3)*.
12. Bowl. Rim fragment of a reddish, funnel-necked bowl decorated with faint vertical channelling on the rim interior. The surface is strongly worn. 4 x 6.3 cm. Inv. no. 88.27.12 *(Pl. 9. 5)*.
13. Pot. Base fragment of a large, grey, thick-walled pot. 7.8 x 6.3 cm. Inv. no. 88.27.13 *(Pl. 8. 6)*.
14. Jug. Body fragment of a light brown, thin-walled jug decorated with vertical and oblique channelling and a subcutaneous handle. 2.5 x 4.0 cm. Inv. no. 88.27.14 *(Pl. 9. 6)*.
15. Bowl (?). Rim fragment of a grey vessel. The surface is worn. 3 x 2.3 cm. Inv. no. 88.27.15 *(Pl. 9. 4)*.

[50] TORMA 1973, 508; BONDÁR 2010a, Fig. 3. 1.

16. Bowl. Rim fragment of a light brown, funnel-necked bowl, decorated with a pattern of alternating vertical and oblique channelling on the rim interior. The surface is strongly worn. 4 x 3.1 cm. Inv. no. 88.27.16 *(Pl. 9. 9)*.
17. Bowl. Body fragments of a larger brownish bowl. The surface is strongly worn. Four fragments. Inv. no. 88.27.17 *(Pl. 9. 2)*.

**Grave 352** (Trench ü/6; *Pl. 7*)

Lying underneath the regular circular stone packing measuring 3 m in diameter, partly made up of larger stones, were the fragments of two bowls (1–2) placed on one another with the mouth downward. Two mussels and a smaller and larger snail lay among the bowl fragments. The sherds of a crushed mug (3) lay north-east of the bowls, while a few other mussels and calcined bones were found some 50 cm north (?) of the bowls. Six mussels were recovered from the burial. The fragments of a broken vessel (4) and two mussels were found east of the grave, beside the stone packing.

Grave goods

1. Bowl. Grey, semi-spherical bowl with strongly worn surface. Refitted. H. 7.5 cm, dM. *ca*. 27 cm. H. 9 cm, dM. 28 cm. Inv. no. 88.28.1 *(Pl. 7. 8)*.
2. Bowl. Fragments of a large, reddish-brown, thin-walled, semi-spherical bowl, originally with polished plain surface. Refitted. Three fragments. H. 7.5 cm, dM. 27 cm. Inv. no. 88.28.2 *(Pl. 7. 5)*.
3. Jug.[51] Fragments of a thin-walled biconical jug with slightly curved rim, short, cylindrical neck and a strap handle. Originally decorated with three subcutaneous handles. The body is decorated with oblique channelling in alternating directions arranged in a triangle pattern. The base is restored. Refitted and restored (the vessel subsequently fell apart). Five fragments. H. 15 cm, dM. 11 cm, dB. 5.5 cm. Inv. no. 88.28.3 *(Pl. 7. 6)*.
4. Bowl. Rim fragment of a reddish-brown, grey mottled, semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim. 6.3 x 6.2 cm. Inv. no. 88.28.4 *(Pl. 7. 7)*.

**Grave 353** (Trenches v/4–v/5 and z/4–z/5; *Pl. 7*)

The greater part of the grave's stone packing measuring 3.5 m by 3 m fell into Trenches v/4–v/5 and z/4–z/5. The stone packing of Graves 390 and 391 lay adjacent to the stone packing of Grave 353 and the three stone packings virtually "overlapped". A deep, dish-like bowl (1) and another bowl (2) lay in the grave's northern part, immediately under the stones, at a depth of 130 cm. Vessel 1 was deposited with the mouth upward. Other finds from the grave were a few pottery sherds, namely the fragment of a channelled mug (3) and a strap handle (4). The grave's north-western corner was disturbed when Pit "D", a Celtic feature, was dug. The Copper Age pottery sherds (5–9) recovered from the Celtic pit probably come from this grave.

Grave goods

1. Dish-pot. Body and base fragments of a large reddish-brown vessel with worn surface. Five fragments. Inv. no. 88.29.1 *(Pl. 7. 11)*.
2. Bowl. Rim and body fragments of a plain, brownish, funnel-necked bowl. The surface is strongly worn. Five fragments. Inv. no. 88.29.2 *(Pl. 7. 16)*.

[51] Torma 1973, Abb. 3. 2.

3. Mug. Body fragment of a dark grey, conical mug decorated with fields filled with wide vertical channelling separated by slender, vertical ribs. The surface is strongly worn. 3.6 x 5.7 cm. Inv. no. 88.29.3 *(Pl. 7. 9)*.
4. Strap handle. This fragment can no longer be found.
5. Mug (?). Body fragment of a mug (?) with the stub of a thick strap handle. The surface is strongly worn. 3 x 2.9 cm. Inv. no. 88.29.4 *(Pl. 7. 10)*.
6. Pot. Body and base fragments of a reddish-brown, thick-walled pot. The surface is strongly worn. Four fragments. Inv. no. 88.29.5 *(Pl. 7. 12)*.
7. Bowl. Rim fragment of a bowl with short funnel neck, decorated with dense vertical channelling on the rim interior. The surface is strongly worn. 3.5 x 2.8 cm. Inv. no. 88.29.6 *(Pl. 7. 15)*.
8. Bowl. Body and base fragments of a small, thin-walled, plain bowl. The surface is strongly worn. Two fragments. 3.1 x 3.2 cm, 2.5 x 2.7 cm. Inv. no. 88.29.7 *(Pl. 7. 13)*.
9. Jug. Body fragment of a brownish jug, decorated with fields separated by subcutaneous handles and oblique channelling. The surface is strongly worn. 3.2 x 3.8 cm. Inv. no. 88.29.8 *(Pl. 7. 14)*.

**Grave 354** (Trenches ü/6–v/6; *Pl. 9*)

The heap of calcined bones lay at a depth of 140 cm, under the larger stones enclosing an oval area in the middle of the stone packing with a diameter of 3 m. The grave did not contain any intact vessels; only a few indistinct pottery sherds (1–3) and a mug fragment (4) were found near the ashes. Small heaps of pottery sherds (5–6) lay under the southern, western and north-western edge of the stone packing. A total of nineteen mussels were recovered from under the stone packing. A heap of small pottery sherds from a bowl (7) lay by the outermost stones on the north-eastern side of the stone packing.

The calcined bone fragments from the grave weighed 4.8 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Mug. Rim fragment of a mug with slightly outcurving rim and short, cylindrical neck. The body was originally polished. 3.5 x 2.2 cm. Inv. no. 88.30.3 *(Pl. 9. 17)*.
2. Pot. Body and base fragments of a large, brownish, grey mottled, thick-walled pot. The surface is worn. Three fragments, one refitted from smaller pieces. Inv. no. 88.30.4 *(Pl. 9. 11)*.
3. Bowl. Rim fragment of a strongly worn, small bowl with flat rim. 1.8 x 1.6 cm. Inv. no. 88.30.5 *(Pl. 9. 15)*.
4. Mug. Body fragment of a reddish-brown conical mug with short, cylindrical neck (?), decorated with vertical channelling. The surface is strongly worn. 6.4 x 6.1 cm. Inv. no. 88.30.2 *(Pl. 9. 12)*.
5. Bowl. Rim fragment of greyish, thick-walled, funnel-necked bowl decorated with a row of punctates around the shoulder. From the heap of sherds on the northern side of the stone packing in Trenches v/6–ü/6. 5.3 x 6.2 cm. Inv. no. 88.132.1 *(Pl. 9. 16)*
6. Bowl. Rim and base fragments of a brownish, thick-walled, plain, funnel-necked bowl. From the heap of sherds on the northern side of the stone packing in Trenches v/6–ü/6. Two fragments. 5.7 x 6.5 cm, 3.6 x 4.6 cm. Inv. no. 88.132.2 *(Pl. 9. 13)*
7. Bowl. Rim and body fragments of a greyish, thick-walled, semi-spherical bowl with slightly outturned rim, decorated with dense vertical channelling on the rim. The interior is decorated with channelling, now strongly worn. The surface is strongly worn. Nine fragments. dM. *ca.* 28 cm. Inv. no. 88.30.1 *(Pl. 9. 14)*.

**Grave 355** (Trenches u/6–u/7; *Pl. 10*)

About one-half of the grave's stone packing with a diameter of 3 m on the boundary of Trench u/6 extended into Trench u/7. The calcined bones were placed on the ground and covered with three bowls (1–3); the fragments of another bowl (4) lay farther from the ashes. Four mussels were also recovered from the grave. Grave depth: 125 cm.

Grave goods

1. Bowl. Funnel-necked, conical bowl. Plain, save for the dense vertical channelling on the rim. The originally polished surface is strongly worn. Refitted and restored. H. 9.5 cm, dM. 30 cm, dB. 8 cm. Inv. no. 88.31.1 *(Pl. 10. 2)*.
2. Bowl. Body and base fragments of a plain, reddish-brown, conical bowl. The originally polished surface is strongly worn. Refitted. H. 5 cm, dB. 7 cm. Inv. no. 88.31.2 *(Pl. 10. 3)*.
3. Bowl. Fragments of a plain semi-spherical bowl. The originally polished surface is strongly worn. Four fragments. H. 7 cm, dM. *ca*. 30 cm, dB. 7.5 cm. Inv. no. 88.31.3 *(Pl. 10. 1)*.
4. Bowl. Rim fragment of a plain semi-spherical bowl with flat rim. The exterior is coarsened. The surface is strongly worn. Refitted. H. 8.5 cm, dM. 28 cm, dB. 6.5 cm. Inv. no. 88.31.4 *(Pl. 10. 7)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

5. Bowl. Fragments of a reddish-brown, grey mottled, conical bowl with short funnel neck. The exterior is plain, the rim interior is decorated with channelling. The surface was originally polished. Refitted. Five fragments. dM. *ca.* 28 cm. Inv. no. 88.31.5 *(Pl. 10. 13)*.
6. Pot. Body fragments of a reddish-brown, thick-walled pot with an elongated, unperforated handle. The surface is strongly worn. Two fragments. 5.6 x 5.4 cm, 5.4 x 5.3 cm. Inv. no. 88.31.6 *(Pl. 10. 9)*.
7. Pot. Base fragment of a reddish-brown pot. The surface is strongly worn. 3.5 x 5.2 cm. Inv. no. 88.31.7 *(Pl. 10. 8)*.
8. Pot (?). Body fragment of a reddish-brown pot with a round knob. The surface is strongly worn. 3.9 x 2.6 cm. Inv. no. 88.31.8 *(Pl. 10. 12)*.
9. Handle. Fragment of a grey, thick handle with roughly square section. 2.4 x 5.2 cm. Inv. no. 88.31.9 *(Pl. 10. 6)*.
10. Pot. Rim fragment of a reddish, strongly worn pot. 3.8 x 4.2 cm. Inv. no. 88.31.10 *(Pl. 10. 10)*.
11. Bowl. Rim fragment of a large, plain, brownish, funnel-necked bowl. The surface is strongly worn. 5.1 x 4.3 cm. Inv. no. 88.31.11 *(Pl. 10. 4)*.
12. Bowl (?). Rim fragment of a strongly worn, funnel-necked bowl Inv. no. 88.31.12 *(Pl. 10. 11)*.
13. Bowl (?). Rim, body and base fragments of a large, plain, funnel-necked bowl. The surface is strongly worn. Four fragments. Inv. no. 88.31.13 *(Pl. 10. 5)*.

**Grave 356** (Trenches ü/6–ü/7; *Pl. 11*)

The stone packing of the grave was found on the boundary between Trenches ü/6 and ü/7. Lying under the stone packing measuring roughly 1.5 m in diameter were a large bowl (1) placed upside down, a second bowl (2) set upright and a third bowl (3) placed upside down on the second bowl as well as the fragments of a pot (4), which had probably been deposited in a broken condition. The ashes were placed

under the large bowl (1). The other finds from the grave were mussels. A few Celtic pottery sherds and animal bones were also recovered from a depth of 40–100 cm during the excavation of the grave.

Grave goods

1. Bowl. Bowl with short funnel neck. The exterior is plain, the rim interior is covered with oblique channelling in alternating directions arranged in a triangle pattern. The originally polished surface is strongly worn. dM. 34 cm, 17 x 18.5 cm. Inv. no. 88.32.1 *(Pl. 11. 1)*.
2. Bowl. Plain semi-spherical bowl with slightly inward swelling rim. The surface is strongly worn. Refitted; fragmentary. H. 9.5 cm, dM. 27 cm, dB. 6 cm. Inv. no. 88.32.2 *(Pl. 11. 4)*.
3. Bowl. Brownish, grey mottled, conical bowl with short funnel neck. The rim is decorated with dense vertical channelling. The originally polished surface is strongly worn. Refitted and restored. H. 7.5 cm, dM. 21 cm, dB. 5.5 cm. Inv. no. 88.32.3 *(Pl. 11. 3)*.
4. Pot. Body fragments of a reddish-brown, grey mottled, large, thick-walled pot. It was deposited in the grave in a fragmented condition. Refitted. Four fragments. Inv. no. 88.32.4 *(Pl. 11. 2)*.

**Grave 357** (Trench v/6)

The grave lay in the eastern corner of Trench v/6. The grave was not covered with stones. The vessel fragments lay scattered at a depth of 110 cm. Small fragments of three crushed vessels were recovered: a pot with a herringbone pattern (1), a semi-spherical bowl (2) and another bowl (3). No more than a few calcined bones lay in the grave, which also contained several snails and a mussel, found among the pottery sherds.

Grave goods

1. Pot. Body fragments of a large, reddish-brown, conical pot decorated with a grooved cordon and a pattern of incised herringbone motifs arranged into vertical bands. Fourteen fragments, one refitted from several smaller pieces. Diam. of belly *ca.* 36 cm. Inv. no. 88.33.1 *(Pl. 11. 5)*.
2. Bowl. Rim and body fragments of a semi-spherical bowl with flat rim. One rim fragment is decorated with lightly impressed punctates on the rim. Refitted. Eleven fragments. dM. *ca*. 28 cm. Inv. no. 88.33.2 *(Pl. 11. 6)*.
3. Bowl. Small fragments of a crushed bowl. The fragments can no longer be found.

**Grave 358**[52] (Trenches v/6–z/6;[53] *Pl. 13*)

The excavation of the grave was performed in two excavation seasons (in 1967 and 1969). The 2.5 m by 2 m large stone packing of the grave lay on the boundary between Trenches v/6 and z/6; the calcined bones lay under the packing, in an oval area outlined by eight to ten larger stones at a depth of 191 cm. The grave goods from the burial were as follows: a mug (1) placed on its side, a semi-spherical bowl (2) deposited with the mouth downward, a plain jug (3) placed on its side, a bowl (4) deposited with the mouth downward, a herringbone-decorated pot (5) tilted to one side, a pot (6) with a double cordon under the rim, a cordon-decorated vessel (7) and a knob-decorated bowl (8), the latter lying under the pot (6). With the exception of the mug (1), the vessels were broken into tiny pieces, It would appear that vessels 4, 6 and 7 were already broken at the time of their deposition. Some fragments of vessel 7 lay

[52] The stone packing of Graves 349 and 390 lay immediately beside the stone packing of Grave 353, with no clear boundary between them.

[53] Mistakenly specified as Trench ü/6 in 1969.

under a large stone, others were found above it, suggesting that they were found in a secondary position after the originally upright stone fell on its side.

The calcined bones weighed 35.6 g. The sex and age of the deceased could not be determined.

Grave goods

1. Mug.[54] Biconical mug with slightly outturned rim, short, cylindrical neck and a strap handle. The belly is decorated with oblique channelling in alternating directions arranged in a triangle pattern. The originally polished surface is strongly worn. H. 6.5 cm, dM. 5.6 cm, dB, 3.3 cm. Inv. no. 88.34.1 *(Pl. 13. 4)*.
2. Bowl.[55] Semi-spherical bowl with coarsened surface. Plain, save for the vertical channelling on the rim. Refitted and restored. H. 9.5 cm, dM. 26. cm, dB. 7 cm. Inv. no. 88.34.2 *(Pl. 13. 3)*.
3 Jug.[56] Reddish-brown, squat, globular jug with slightly outturned rim and furrowed strap handle, decorated with alternating oblique channelling arranged in a triangle pattern on the belly. The surface is strongly worn. Refitted and restored. H. 12.5 cm, dM. 9.3 cm, dB. 4 cm. Inv. no. 88.34.3 *(Pl. 13. 5)*.
4. Bowl.[57] Funnel-necked, conical bowl, decorated with vertical channelling on the rim and three pairs of round knobs of the belly. The arrangement of the knob pairs is not symmetrical on the coarsened exterior. The base interior is divided into four fields filled with horizontal and vertical channelling. The surface is polished. Refitted and restored. The vessel was deposited in the grave in a broken condition. H. 9.5 cm, dM. 27 cm, dB. 8 cm. Inv. no. 88.34.4 *(Pl. 13. 9)*.
5. Pot.[58] Brownish pot with slightly outturned rim and elongated S profile, decorated with two horizontally perforated string-hole lugs and a herringbone pattern, which had probably covered the entire vessel body from the rim downward. Refitted and restored, the base is missing. Three fragments. H, 10.5 cm, dM. 14.5 cm. Inv. no. 88.34.5 *(Pl. 13. 7)*.
6. Pot.[59] Rim and body fragments of a large brownish pot with elongated S profile, decorated with a double grooved cordon under the rim and small round knobs on the shoulder. The furrowed string-hole lug springs from the rim. Refitted and restored. H. 15 cm, dM. 32 cm. Inv. no. 88.34.6 *(Pl. 13. 6)*.
7. Amphora.[60] Brownish, globular amphora with short, incurving neck, decorated with a grooved cordon around the shoulder and a pair of short loop handles underneath. The surface is strongly worn. Refitted and restored. H. 23.5 cm, dM. 13.5 cm, dB. 8.5 cm. Inv. no. 88.34.7 *(Pl. 13. 1)*.
8. Bowl.[61] Funnel-necked, biconical bowl, decorated with short vertical channelling on the rim and three pairs of small round knobs on the belly. The exterior is coarsened, the base interior is divided in four and filled with horizontal and vertical channelling. The originally polished surface is strongly worn. Refitted. H. 8 cm, dM. 24 cm, dB. 7 cm. Inv. no. 88.34.8 *(Pl. 13. 8)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

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[54] Torma 1971, Taf. 40. 5.
[55] Torma 1971, Taf. 40. 1.
[56] Torma 1971, Taf. 40. 8.
[57] Torma 1971, Taf. 40. 3.
[58] Torma 1971, Taf. 40. 2.
[59] Torma 1971, Taf. 40. 9.
[60] Torma 1971, Taf. 40. 6.
[61] Torma 1971, Taf. 40. 4.

9. Pot.[62] Small brownish pot with elongated S profile, decorated with a row of small round knobs on the belly and two unperforated lugs springing from the rim. Refitted and restored. H. 10–10.8 cm, dM. 12.8 cm, dB. 6 cm. Inv. no. 88.34.9 *(Pl. 13. 2)*.

**Grave 359** (Trenches v/5–z/5; *Pl. 11*)

The grave's stone packing covered a roughly circular area with a diameter of *ca.* 2 m. Fragments of an animal figurine (8) lay in part under one of the outer stones on the packing's western side, at a depth of 125 cm. The figurine was crushed into four fragments: the two hind legs lay in top view, the head in side view. The two fragments of the body remained roughly in their original position and an additional fragment lay some 10 cm from the head. The two forelegs were not found. Several fragments of a horn-shaped vessel (7) likewise lay outside the stone packing. Fragments of one vessel (6) came to light beside one of the larger stones. The ashes were placed on the ground under the middle of the stone packing and were covered with three (or perhaps four) bowls (1–4). A handled mug (5) was also deposited in the grave and a few mussels[63] were found among the ashes. Animal bones were identified during the washing of the finds.

The calcined bones weighed 31.2 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Bowl.[64] Brownish, grey mottled, conical bowl with funnel neck, decorated with vertical combing on the exterior. The rim interior is covered with alternating vertical and oblique channelling arranged into fields. Remains of channelling are visible on the base interior. The originally polished surface is strongly worn. Refitted and restored. H. 9.5 cm, dM. 31 cm, dB. 9.5 cm. Inv. no. 88.35.1 *(Pl. 12. 5)*.
2. Bowl.[65] Semi-spherical bowl decorated with a groove encircling the body under the rim and irregularly spaced punctates on the rim. The interior is covered with a pattern made up of triangular fields filled with channelled herringbone motifs separated by five bundles of three channelled lines spreading outward radially from the channelled concentric circles around the base interior. The originally polished surface is strongly worn. Refitted and restored. H. 10.8–11.8 cm, dM. 38.5 cm, dB. 11 cm. Inv. no. 88.35.2 *(Pl. 12. 6)*.
3. Bowl. This vessel can no longer be found.
4. Bowl. This vessel can no longer be found.
5. Mug. Body and strap handle fragments of a brownish mug with a furrowed strap handle. The belly is covered with channelling The originally polished surface is strongly worn. Eight fragments. Inv. no. 88.35.3 *(Pl. 12. 3)*.
6. Bowl. Rim, body and base fragments of a semi-spherical (?) greyish bowl. The surface is worn. Six fragments, found on the outer side of the stone packing's large eastern stone. Inv. no. 88.35.7 *Pl. 11. 12)*.
7. Rhyton.[66] Brown-dark greyish, cattle horn-shaped drinking vessel with slightly outturned rim and pointed base, now broken, with a perforation for suspension. A low cordon separates the vessel's

[62] Torma 1971, Taf. 40. 7.

[63] Pál Sümegi identified the following species: one fragment came from *Bradybaena fructium*, two from *Cepaea vindobonensis* and one was the left valve of an *Unio crassus* mussel.

[64] Torma 1973, Abb. 2. 3.

[65] Torma 1970, Taf. 18; Torma 1973, Abb. 2. 7.

[66] Torma 1973, Abb. 5. 1; Bondár 2010a, Fig. 3. 3.

tip from the body covered with an incised zig-zag pattern. The rim is decorated with short straight incisions. The surface is strongly worn in patches. Refitted and restored. L. 21.5 cm, dM. 9.5–9.7 cm. Inv. no. 88.35.4 *(Pl. 12. 4)*.

8. Animal figurine.[67] Animal figurine portraying a long-bodied, stocky sheep. The head and the ears are triangular. The eyes and the nostrils are not depicted, the mouth is indicated with a deep incision across the face. The short tail is held up and wagged leftward. There is a small depression under the tail. Dark grey, poorly fired, even exterior. The body is refitted from several fragments: the neck, the right foreleg and the lower part of the belly are restored. The tip of the tail broke off. L. 20 cm, Th. of body 4.6 cm. Inv. no. 88.35.5 *(Pl. 12. 2)*.[68]

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:[69]

9. Bowl. Rim fragments of a plain, reddish-brown, funnel-necked bowl. The surface is strongly worn. Refitted. The rim interior was originally decorated with channelling. Four fragments. dM. 45 cm. Inv. no. 88.35.6 *(Pl. 12. 1)*.
10. Bowl. Rim fragments of greyish, funnel-necked bowl, decorated with channelling on the rim interior. The surface is strongly worn. Three fragments. Inv. no. 88.35.8 *(Pl. 11. 11)*.
11. Bowl. Rim fragment of a large, greyish, funnel-necked bowl. Plain, the surface is strongly worn. 5.7 x 6.1 cm. Inv. no. 88.35.9 *(Pl. 11. 8)*.
12. Bowl. Body fragments of a greyish bowl with coarsened surface. The surface is strongly worn. Three fragments. Inv. no. 88.35.10 *(Pl. 11. 9)*.
13. Bowl. Body fragment of a large greyish bowl decorated with channelling on the interior. 6.3 x 5.6 cm. Inv. no. 88.35.11 *(Pl. 11. 7)*.
14. Bowl. Body fragments of reddish-brown bowl with coarsened surface. One fragment bears channelling on the interior side. Two fragments. 3.9 x 2.7 cm, 3.6 x 7.8 cm. Inv. no. 88.35.12 *(Pl. 11. 10)*.

**Grave 360** (Trenches z/3–zs/3; *Pl. 14*)

The grave was located on the boundary between Trenches z/3 and zs/3. The grave's stone packing with a diameter of 1.5 m lay at a depth of 140 cm, while the grave goods underneath the stone packing at a depth of 150 cm: a bowl (1) deposited with the mouth downward and the fragments of a channelled mug (2) beside it. The fragments of a pot (3) lay slightly farther. A mussel was found at a depth of 160 cm under the bowl, and a burnt limestone fragment also came to light from under this vessel. No calcined bone fragments were preserved.

Grave goods

1. Bowl. Rim and body fragments of a plain conical bowl with short funnel neck. The originally polished surface is strongly worn. Refitted. Five fragments. dM. 21 cm. Inv. no. 88.36.1 *(Pl. 14. 1)*.

[67] Torma 1972, Kat. Nr. 273; Torma 1973a, 24, Kat. Nr. 273; Torma 1973, Abb. 5. 2.

[68] Displayed at the permanent exhibition of the Hungarian National Museum in 2013.

[69] It seems likely that these vessel fragments come from the two bowls which had originally covered the ashes in the middle of the stone ring.

2. Mug.[70] Rim and body fragments of a conical mug with slightly outturned rim, short, cylindrical neck and short strap handle, decorated with oblique channelling on the "ribs" pressed out from the vessel interior. H. (at the handle) 6.2 cm, dM. 7 cm. Inv. no. 88.36.2 *(Pl. 14. 3)*.
3. Pot. Body and base fragments of a large, thick-walled pot with coarsened surface. The finger imprints on the exterior indicate how the clay was worked. Six fragments. Inv. no. 88.36.3 *(Pl. 14. 2)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

4. Pots. Rim, body and handle fragments of greyish and reddish thick-walled pots. Five fragments. Inv. no. 88.36.4 *(Pl. 14. 4)*.

**Grave 361** (Trenches zs/3–zs/4; *Pl. 14*)

The 2.5 m by 2 m stone packing of the grave lying on the boundary of Trenches zs/3 and zs/4 was found at a depth of 125–140 cm. The calcined bone fragments were scattered across a roughly circular area measuring *ca.* 30 cm across, under the middle of the stone packing. No pottery sherds were found beside the bone fragments. The fragments of a broken bowl (1) with the mouth downward and a few calcined bones under them were found beside the south-eastern edge of the stone packing and underneath it, at a depth of 150 cm, while the fragments of another vessel (2) came to light under the western edge of the packing. Fragments of a mug (3) covering a mussel lay east of the bowl. A few broken animal bones were also recovered from the grave. The greater part of the grave was uncovered in the 1967 season, save for the edge of the stone packing, which extended into Trench zs/4. A few pottery sherds (4–6) lay under the stones.

Grave goods

1. Bowl. Rim and body fragments of a funnel-necked bowl, decorated with vertical channelling on the rim interior. The surface is strongly worn. Refitted. Three fragments. Inv. no. 88.37.1 *(Pl. 14. 7)*.
2. Amphora (?). Rim and body fragments of a reddish, thick-walled vessel with outturned rim. The surface is strongly worn. Five fragments. Inv. no. 88.37.2 *(Pl. 14. 9)*.
3. Mug. Rim and body fragments of a greyish, thin-walled mug. The stub of a strap handle and faint channelling survive on one fragment. The surface was originally polished. Refitted. Five fragments. Inv. no. 88.37.3 *(Pl. 14. 8)*.
4. Miniature pot (?). Body and base fragments of a brownish, thin-walled, miniature vessel decorated with an incised herringbone pattern on the belly. 4.4 x 4.3 cm. Inv. no. 88.37.4 *(Pl. 14. 6)*.
5. Pot. Rim and body fragments of a small, greyish, coarse, thick-walled pot with slightly incurving neck and elongated S profile. Three fragments. Inv. no. 88.37.5 *(Pl. 14. 5)*.
6. Bowl. Body fragments of a reddish-brown, coarse bowl. The plain surface is strongly worn. Two fragments. 5.8 x 4.8 cm, 4.3 x 5.3 cm. Inv. no. 88.37.6 *(Pl. 14. 10)*.

[70] TORMA 1973, Abb. 3. 6.

**Grave 362** (Trench zs/3)

The grave lay in the middle of the trench. The irregular stone packing measuring 2 m by 2 m lay at a depth of 110–140 cm. Three bowls (2–4) lay outside the stone packing, one broken bowl (1) and a broken pot (5) in its middle. The calcined bones were found under the pot.

Grave goods

1. Amphora (?). Rim and body fragments of a reddish, thick-walled amphora. The surface is strongly worn. Refitted. Twenty-two fragments. Inv. no. 88.38.1 *(Pl. 15. 5)*.
2. Bowl.[71] Funnel-necked, conical bowl, decorated with a row of stabs around the shoulder. The rim interior is covered with a design of alternating vertical and oblique channelling arranged into fields. The interior is divided into fields by vertical channelling; the fields are filled with oblique channelling in alternating directions. The surface was originally polished. Refitted and restored, the base is missing. Thirty-four fragments. The vessel fell apart after it was photographed. Inv. no. 88.38.2 *(Pl. 15. 1)*.
3 Bowl. Rim fragment of a reddish, funnel-necked bowl. The rim interior is covered with wide oblique channelling. A row of light stabs encircles the shoulder; a small round knob is set on the shoulder. The surface is strongly worn. 8.1 x 8.3 cm. Inv. no. 88.38.3 *(Pl. 15. 6)*.
4. Bowl. Body fragments of a large, greyish-brown, conical bowl. The interior is plain, the exterior is decorated with light scoring recalling combed decoration. Two fragments. 11.5 x 8.4 cm, 14.5 x 12 cm. Inv. no. 88.38.4 *(Pl. 15. 9)*.
5. Amphora. Rim and body fragments of a large, reddish amphora with elongated S profile. A slender, grooved cordon encircles the shoulder; the belly is coarsened. Four fragments, each refitted from smaller ones. Inv. no. 88.38.5 *(Pl. 15. 8)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

6. Pot. Rim and body fragments of a reddish, thick-walled pot. The surface is strongly worn. Two fragments. Inv. no. 88.38.6 *(Pl. 15. 7)*.
7. Jug. Body fragment of a brownish, thin-walled jug, decorated with faint vertical channelling. The surface is worn. 6.4 x 4.1 cm. Inv. no. 88.38.7 *(Pl. 15. 3)*.
8. Pot. Rim fragment of a brownish pot with slightly outturned rim, decorated with a pair of slender, grooved cordons under the rim. 2.4 x 4.9 cm. Inv. no. 88.38.8 *(Pl. 15. 2)*.
9. Bowl. Rim and body fragments of a reddish bowl, decorated with faint oblique channelling in the interior. The surface is strongly worn. Three fragments. dM. 18 cm. Inv. no. 88.38.9 *(Pl. 15. 4)*.
10. Bowl. Funnel-necked, conical bowl. The rim interior is decorated with vertical channelling[72] *(Pl. 15. 10)*.

**Grave 363** (Trenches x/3–x/4)

The stone packing of this grave and of Grave 364 both lay at a depth of 120–140 cm in Trench x/3. The stones of the two grave packings partly overlapped.

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[71] Torma 1973, Abb. 2. 4.

[72] The bowl could no longer be found when the finds were inventoried and has not been identified since. István Torma published his own drawing of the bowl (Torma 1973, Abb. 2. 1), which was adopted for this publication.

The calcined bones were covered with a bowl (1) under the 4 m long stone packing. The fragments of two other vessels (2–3) lay under the edge of the stone packing. A few animal bones lay beside the bowl (1). The greater part of the grave was excavated in the 1967 season; only the edge of the stone packing extended into Trench x/4. The fragments of a pot or bowl (4–5)[73] lay by the north-eastern edge of the stone packing and several broken bowls (6–8) were found under the stone packing. Animal bones were identified during the washing of the finds.

The calcined bones weighed 138.5 g. The remains came from a 20–39-year-old adult, whose sex could not be determined.

Grave goods

1. Bowl. Rim and body fragments of a large funnel-necked bowl. The rim interior is covered with dense vertical channelling and a oblique channelling in alternating directions arranged in a triangle pattern. The exterior was polished and the lower half was coarsened. Refitted. Eight fragments. dM. 40 cm. Inv. no. 88.39.1 *(Pl. 14. 11)*.
2. Pot. Rim and body fragments of a greyish pot with elongated S profile, decorated with a row of fingertip impressions under the rim. From Trench x/4, not part of the grave inventory. Inv. no. 88.39.2 *(Pl. 14. 13)*.
3. Pot. Body fragments of a large, brownish, thick-walled pot with coarsened surface. Thirteen fragments, each refitted from smaller ones. Inv. no. 88.39.3 *(Pl. 14. 18)*.
4. Bowl. Rim fragments of a greyish, thin-walled, funnel-necked bowl. Plain, the surface is strongly worn. Two fragments. 5.2 x 3.5 cm, 3.8 x 5.6 cm. Inv. no. 88.39.4 *(Pl. 14. 16)*.
5. Bowl. Rim fragment of a greyish, thin-walled, funnel-necked bowl. The surface is strongly worn. 4.4 x 3.6 cm. Inv. no. 88.39.5 *(Pl. 14. 12)*.
6. Bowl. Rim fragment of a thin-walled, semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim. The surface is strongly worn. 3.4 x 2.1 cm. Inv. no. 88.39.6 *(Pl. 14. 17)*.
7. Bowl. Body fragment (from above the base) of a brownish, thick-walled bowl with coarsened exterior. Refitted. 7.9 x 9.4 cm. Inv. no. 88.39.7 *(Pl. 14. 15)*.
8. Bowl. Body fragments of a greyish bowl with gritty tempering. The surface is worn. Three fragments. Inv. no. 88.39.8 *(Pl. 14. 14)*.

**Grave 364** (Trenches x/3–x/4 and y/3–y/4; *Pl. 16*)

The stone packing of this grave and of Grave 363 lay at a depth of 120–140 cm in Trench x/3. The stone packing of the two graves overlapped partly.

A part of the irregularly shaped stone packing of the grave lay in Trench x/3, excavated during the 1967 season. Many calcined bone fragments were uncovered at a depth of 120–130 cm under the stone packing extending into Trench x/4. The bones were weakly burnt and fragments of long bones and the skull cap could be clearly identified. A few indistinct pottery sherds (3) and two spindle whorls (11–12) lay among the ashes. Several pottery sherds (4–8) were found under the edge of the stone packing, some of which came from a deep conical bowl (1) and a pot (2), while others from one or two bowls (9). One remarkable piece was a zoomorphic handle fragment (10); unfortunately, the vessel itself was not among the grave goods. The soil under the calcined bones and the pottery sherds was of a light brown, dark yellowish colour.

[73] A mussel fragment (*Cepaea vindobonensis*) was found among the bowl fragments.

The calcined bones from the grave weighed 126.8 g. They were identified as the remains of a 20–59-year-old adult/mature adult, possibly a woman.

Grave goods

1. Dish-pot. Rim, body and base fragments of a conical dish-pot. The exterior is coarsened, the interior is plain. The surface is strongly worn. Four fragments, each refitted from smaller sherds. H. 13 cm, dM. 31-32 cm. Inv. no. 88.40.1 *(Pl. 16. 12)*.
2. Pot. Rim and body fragments of a reddish-brown pot with elongated S profile, decorated with a pair of slender, grooved cordons under the rim. Refitted. Five fragments. dM. 40 cm. Inv. no. 88.40.2 *(Pl. 16. 3)*.
3. Jug. Rim and body fragments of a small, grey, thin-walled jug, decorated with oblique channelling in fields separated by slender ribs on the belly. The surface is strongly worn. Thirteen fragments. Inv. no. 88.40.3 *(Pl. 16. 7)*.
4. Bowl. Rim, body and base fragments of a greyish conical bowl. The rim is covered with dense vertical channelling, underneath which a groove encircles the neck. The belly is decorated with dense combing. The base interior is divided into four fields filled with oblique channelling in alternating directions. The surface is strongly worn. Six fragments. dB. 8 cm. Inv. no. 88.40.4 *(Pl. 16. 11)*.
5. Bowl. Rim and base fragments of a grey, funnel-necked bowl, decorated with slightly oblique, pronounced channelling. The surface is strongly worn. Five fragments. dM. 30 cm. Inv. no. 88.40.5 *(Pl. 16. 4)*.
6. Bowl. Body fragments of a reddish-brown bowl with a furrowed, unperforated strap handle. Two fragments. Inv. no. 88.40.7 *(Pl. 16. 5-6)*.
7. Bowl. Base fragment of a bowl, divided into four fields filled with channelling in opposite directions. 7.4 x 4.7 cm. Inv. no. 88.40.8 *(Pl. 16. 9)*.
8. Bowl. Rim fragment of a plain, funnel-necked bowl. The surface is strongly worn. 7 x 7.2 cm. Inv. no. 88.40.6 *(Pl. 16. 8)*.
9. Amphora. Body fragment of a brownish amphora. The surface is strongly worn. Refitted from several fragments. Inv. no. 88.40.9 *(Pl. 16. 10)*.
10. Zoomorphic handle. Brownish jug handle modelled in the shape of an animal. The body is decorated with faint oblique channelling. The head is lozenge-shaped, the legs are indicated with incisions. The surface is worn. 2.8 x 6 cm. Inv. no. 88.40.10 *(Pl. 16. 2)*.

11–12. Spindle whorls. Conical spindle whorls, one with a flat, the other with a domed base. Brown; the surface is worn. Two fragments. Diam. 5 cm, 5.2 cm. Inv. no. 88.40.11 *(Pl. 16. 1)*.

**Grave 365** (Trenches z/2–zs/2 and z/3–zs/3; *Pl. 17*)

The stone packing of the grave was first noted at a depth of 140–150 cm in the western corner of Trench zs/3 during the 1967 season. It extended towards Trenches z/2–zs/2 and z/3, unexcavated at the time. No pottery was found in the excavated portion of the grave. The other part of the grave was uncovered during the 1971 season. About one-third of the roughly 4 m long stone packing lay in the corner of Trench z/3, at a depth of 115 cm, the other portions fell into Trenches z/2 and zs/2. A few pieces of charcoal were found in a circular area with a diameter of *ca*. 5 m under the stone packing near the corner of Trench z/3. A few fragments of a bowl (1) lay roughly in the middle of the stone packing and the fragments of a cup (2) near the northern edge of the stone packing. Other pottery sherds (3–8) were found beyond the northern edge of the stone packing; however, their association with the grave is dubious.

Grave goods

1. Bowl. Rim, body and base fragments of a plain, dark brown, sharply carinated bowl with incurving funnel neck. Five fragments. dM. 20 cm. Inv. no. 88.41.4 *(Pl. 17. 1)*.
2. Cup. Brownish-grey, thin-walled cup with wide mouth, cylindrical neck and squat, globular body, decorated with oblique and vertical channelling, separated by three symmetrically placed, perforated, vertical subcutaneous handles. The surface was originally polished. Refitted and restored; the handle is a reconstruction. H. 6.5 cm, dM. 12 cm. Inv. no. 88.41.1 *(Pl. 17. 5)*.
3. Pot. Brownish-red globular vessel with slightly curved rim and short, cylindrical neck, decorated with a groove encircling the shoulder and a frieze of pendent triangles filled with *Furchenstich*-style stab-and-drag hatching with the remnants of the lime encrustation. The originally polished surface is strongly worn. Refitted and restored. Two fragments. H. 9 cm, dM. 10.2–10.7 cm, dB. 4.5 cm. Inv. no. 88.41.2 *(Pl. 17. 6)*.
4. Pot. Body fragment of a brownish, dark mottled pot with globular belly, decorated with a pendent triangle filled with *Furchenstich*-style stab-and-drag hatching. 7.2 x 6.8 cm. Inv. no. 88.41.3 *(Pl. 17. 3)*.
5. Jug. Body and handle fragments of a light brown jug decorated with vertical grooves and oblique channelling. The handle is furrowed. Four fragments. Inv. no. 88.41.5 *(Pl. 17. 7)*.
6. Bowl. Rim and body fragments of a brownish, grey mottled, funnel-necked bowl, decorated with a row of short stabs around the shoulder combined with a small knob underneath. The rim interior is covered with oblique channelling. Refitted. Four fragments. Inv. no. 88.41.6 *(Pl. 17. 4)*.
7. Bowl. Rim and body fragments of a small, funnel-necked bowl. The plain surface is strongly worn. Six fragments. Inv. no. 88.41.7 *(Pl. 17. 2)*.
8. Mug. Rim and body fragments of a greyish, thin-walled mug with incurving neck. The body is covered with fields filled with oblique hatching separated by a slender, vertical rib. The surface was originally polished. Refitted. Nine fragments. Inv. no. 88.41.8 *(Pl. 17. 8)*.

**Graves 366–381**: Celtic burials

**Grave 382** (Trench z/6; *Pl. 17*)

The grave was indicated by a round stone packing measuring 2.5–2.7 m in diameter. The calcined bones were scattered across a 60 cm long area. The grave lay at a depth of 182 cm. The grave contained a jug (1) deposited with its mouth downward and a bowl (2) similarly set upside down, broken into tiny pieces. The bowl was probably already broken at the time of its deposition because one rim fragment was found at a distance of 50 cm from the other vessel fragments. A mussel[74] was found among the bowl and jug fragments, and a human (?) tooth lay under the calcined bones. An antler fragment and several pot fragments (3–4) were found under the northern part of the stone packing.

The calcined bone fragments from the grave weighed 71.7 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Jug. Squat, globular jug with cylindrical neck. The body is divided into fields by three subcutaneous handles formed towards the vessel interior and symmetrically placed triple ribs created by vertical grooving. The fields are filled with a combination of oblique channelling forming a triangle

[74] The broken right valve of an *Unio crassus* mussel.

and vertical channelling underneath. The wide-furrowed handle springs from the rim. Refitted. H. 10.5 cm, dM. 10 cm, dB. 4 cm. Inv. no. 88.42.1 *(Pl. 17. 9)*.

2. Bowl. Plain semi-spherical bowl with slightly pitted surface. Refitted and restored, about one-half is missing. H. 8.7 cm, dM. 26.7 cm, dB. 5.2 cm. Inv. no. 88.42.2 *(Pl. 17. 10)*.
3. Pot. Belly fragment of a large, reddish-brown, thick-walled pot, decorated with a zig-zag pattern. Refitted from three fragments. 13.8 x 7.9 cm. Inv. no. 88.42.3 *(Pl. 17. 12)*.
4. Pot. Body fragment of a reddish-brown, thick-walled pot, decorated with a grooved cordon around the shoulder and a herringbone pattern underneath. 4.9 x 6.1 cm. Inv. no. 88.42.4 *(Pl. 17. 11)*.

**Grave 383** (Trenches z/5–z/6; *Pl. 18*)

The grave lying at a depth of 182 cm lacked a stone packing. The fragments of a large bowl (1) were enclosed by six stones arranged in a semi-circle. The bowl was probably broken at the time of its deposition. A few calcined bone fragments lay under the bowl.

The calcined bone fragments from the grave weighed 4.3 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Rim, body and base fragments of a large, reddish-brown, thick-walled bowl with funnel neck. The surface is strongly worn. Refitted. It fell apart after it was photographed. Seventeen fragments. dM. 46 cm. Inv. no. 88.43.1 *(Pl. 18. 1)*.

**Grave 384** (Trench zs/6; *Pl. 18*)

The grave was indicated by a stone lying at a depth of 200 cm. The calcined bones strewn on the ground were covered by the fragments of a deep bowl (2) and the base fragments of another vessel (3). A cup (1) with chipped rim lay on the northern part of the grave.

The small fragments of two bowls (4–5) lay near the cup (1). There were no calcined bones beside these pottery sherds. A strap handle fragment (6) was also found beside the sherds. It was impossible to determine whether these pottery fragments marked a separate grave or whether they were part of the grave inventory of Grave 384, and thus they were labelled Grave 384/a.

The calcined bone fragments from the grave weighed 32.5 g. The age and sex of the deceased could not be determined.

Grave goods

1. Cup. Reddish, thin-walled cup with short neck and squat, globular body on which the stub of a handle survives. Refitted and restored. H. 4.5 cm, dM. 6.3 cm. Inv. no. 88.44.1 *(Pl. 18. 3)*.
2. Bowl. Reddish-brown, thin-walled, semi-spherical bowl. The originally polished surface is strongly worn. Refitted, one-half is missing. The base is reconstructed. H. 10.5 cm, dM. 27 cm, dB. 6.5 cm. Inv. no. 88.44.2 *(Pl. 18. 2)*.
3. Storage jar. Thick-walled, asymmetric, biconical storage jar, with two symmetrically placed handles on the belly. Refitted and restored. H. 19.5 cm, dM. 22 cm, dB. 11 cm. Inv. no. 88.44.3 *(Pl. 18. 4)*.
4. Bowl. The fragments can no longer be found.
5. Bowl. The fragments can no longer be found.
6. Handle. A strap handle fragment that can no longer be found.

**Grave 384/a**

See Grave 384 for the grave description.

The small fragments of two bowls (4–5) lay near the cup (1). There were no calcined bones beside these pottery sherds. A strap handle fragment (6) was also found beside the sherds. It was impossible to determine whether these pottery fragments marked a separate grave or whether they were part of the grave inventory of Grave 384, and thus they were labelled Grave 384/a.

Grave goods

1. Jug. Rim, body and handle fragments of a brownish, thin-walled jug with incurving neck and globular body. Plain, save for the parallel grooves encircling the neck. The surface is strongly worn. Three fragments. Inv. no. 88.45.1 *(Pl. 18. 5)*.
2. Pot. Body fragments of a thick-walled pot. The surface is coarsened. Seven fragments. Inv. no. 88.45.2 *(Pl. 18. 6)*.

**Grave 385**[75] (Trench z/5; *Pl. 19*)

The grave lay at a depth of 156 cm, under a loose stone packing of large stones measuring 2 m by 2 m. It contained a large semi-spherical spherical bowl (2) covering a bowl with outturned rim (3) and a jug (1) placed onto it.

A few scattered pottery sherds (5) were also found. The body fragment of a large vessel decorated with a zig-zag pattern (4) lay on the large bowl (2). All the vessels were crushed by the weight of the earth. The calcined bones were placed in one of the bowls (3), with a few bones lying under the vessel.

The calcined bone fragments from the grave weighed 83.9 g. The remains came from a 20–x-year-old adult female (?).

Grave goods

1. Jug. Yellowish-brown, worn jug, decorated with four parallel grooves encircling the neck. Seven vertical ribs divide the belly into fields, all filled with vertical channelling. The handle is lobed. Refitted and restored. H. 11.8 cm, dM. 9.2 cm, dB. 5 cm. Inv. no. 88.46.1 *(Pl. 19. 5)*.
2. Bowl. Semi-spherical bowl with flat rim. The plain, originally polished exterior is pitted. Refitted and restored. H. 7.5 cm, dM. 21.5 cm, dB. 6.5 cm. Inv. no. 88.46.2 *(Pl. 19. 1)*.
3. Bowl. Funnel-necked conical bowl with a horizontally set furrowed string-hole lug. A row of lightly impressed punctates encircles the shoulder. The body is decorated with an incised herringbone pattern. The base interior is divided in four, each section filled with channelling in alternating directions. The surface is strongly worn. Refitted and slightly restored. H. 9 cm, dM. 25.5 cm, dB. 7.2 cm. Inv. no. 88.46.3 *(Pl. 19. 3)*.
4. Pot. Body fragment of a large, thick-walled pot, decorated with a zig-zag pattern. 6.8 x 10.3 cm. Inv. no. 88.46.4 *(Pl. 19. 4)*.
5. Bowl. Rim fragments of a small funnel-necked bowl, decorated with channelling in alternating directions arranged in a triangle pattern. Two joining fragments. 3.9 x 4.3 cm, 2.3 x 2.6 cm. Inv. no. 88.46.5 *(Pl. 19. 2)*.

[75] TORMA 1973, Abb. 1. 3.

**Grave 386** (Trench x/4; *Pl. 19*)

A broken mug (1) tilted to one side and a bowl (2) placed with the mouth downward lay in the grave ringed by eight stones forming a circle measuring 1 m in diameter. A few scattered rim fragments (3–7) came from various other vessels. A flint arrowhead (8) lay above the pottery sherds. The grave did not contain any calcined bones. Depth of grave: 147 cm.

Grave goods

1. Mug. Biconical mug with slightly outturned rim and cylindrical neck. The belly is lobed by ten ribs pressed out from the vessel interior; three are vertically perforated (?) subcutaneous handles. The lobes are covered with oblique channelling in alternating directions. The handle is furrowed. Refitted and restored. H. 7.5 cm, dM. 7.3 cm, dB. 3.5 cm. Inv. no. 88.47.1 *(Pl. 19. 9)*.
2. Bowl. Semi-spherical bowl with short neck. A horizontal groove runs under the rim. The originally polished surface is strongly worn. Refitted and restored, the rim is chipped. H. 7.8 cm, dM. 20.3 cm, dB. 6.8 cm. Inv. no. 88.47.2 *(Pl. 19. 12)*.
3. Bowl. Rim fragments of a funnel-necked, thick-walled bowl, decorated with fields filled alternately with vertical and oblique channelling on the rim interior. The surface is strongly worn. Refitted. Two fragments. 7 x 10.8 cm, 8 x 11.7 cm. dM. 44 cm. Inv. no. 88.47.3 *(Pl. 19. 8)*.
4. Jug. Body fragment of a light brown jug, decorated with fields filled with oblique channelling separated by three slender ribs created by grooving. The surface was originally polished. 5.1 x 5.4 cm. Inv. no. 88.47.4 *(Pl. 19. 7)*.
5. Bowl. Rim fragment of a small, funnel-necked bowl, decorated with dense vertical channelling on the rim. The surface was originally polished. Refitted. 9.3 x 3.5 cm. Inv. no. 88.47.5 *(Pl. 19. 11)*.
6. Bowl. Rim fragment of a plain, thick-walled, semi-spherical bowl. A row of loosely spaced stabs runs under the rim. 5.4 x 6.4 cm. Inv. no. 88.47.6 *(Pl. 19. 6)*.
7. Jug. Body fragments of a grey, thin-walled jug, decorated with faint vertical channelling. The surface is worn. Three fragments. Inv. no. 88.47.7 *(Pl. 19. 10)*.
8. Arrowhead-like micro-chip. L. 0.7 cm, W. 1.5 cm, Th. 0.9 cm. Inv. no. 88.47.8 *(Pl. 19. 13)*.

**Grave 387** (Trench x/4; *Pl. 20*)

The grave lacking a stone packing lay at a depth of 160 cm. Lying in the middle of the grave was a small bowl (1) and a clay spoon (2) underneath it, beside which there was a single tiny calcined bone fragment. Two bowls had perhaps also been part of the grave inventory; several fragments of these vessels (3–6) were dislodged from their original position during the excavation. The possible association between the stone axe (7) found above the grave at a depth of 145–150 cm and the burial is dubious. A boar tusk fragment was identified during the washing of the finds.

The calcined bone fragment from the grave weighed 0.4 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Plain, thin-walled, conical bowl with oval mouth. The greyish miniature vessel was carelessly made. Refitted. H. 3.5 cm, dM. 7–8 cm, dB. 2.0 cm. Inv. no. 88.48.2 *(Pl. 20. 1)*.
2. Clay spoon. Greyish clay spoon with boat-shaped bowl and a handle made from a clay coil drawn out from the plain body. The end of the handle is flattened. L. of bowl 5.4 cm, W. of bowl 3.4 cm, L. of handle 5 cm. Inv. no. 88.48.3 *(Pl. 20. 2)*.

3. Bowl. Rim, body and base fragments of a large, reddish, thick-walled, semi-spherical bowl. The plain surface is strongly worn. Refitted from smaller pieces. Two fragments. H. 17 cm, dM. 28 cm, dB. 10 cm. Inv. no. 88.48.1 *(Pl. 20. 5)*.
4. Bowl. Rim fragment of a large, funnel-necked bowl with slightly outturned rim. The exterior is plain, the rim interior is covered with pronounced vertical channelling. The surface is strongly worn. Refitted. 5.7 x 11.6 cm. Inv. no. 88.48.4 *(Pl. 20. 7)*.
5. Jug. Body fragments of a large jug with subcutaneous handles formed towards the vessel interior. The handle is divided by three slender, vertical ribs created by grooving and is flanked by oblique channelling in opposite directions. The vessel originally had a polished surface. Refitted. Two fragments. The pottery sherds believed to come from two bowls originated from different vessel types, described here and under no. 6. 4.8 x 5.2 cm, 6 x 2.3 cm. Inv. no. 88.48.5 *(Pl. 20. 6)*.
6. Bowl. Body fragment of a greyish, thin-walled bowl, decorated with parallelly incised oblique lines and punctates on the exterior and light channelling arranged in a radiate pattern on the interior. The surface is worn. 3.3 x 5.5 cm. Inv. no. 88.48.6 *(Pl. 20. 3)*.
7. Stone axe. Fragment of a trapezoidal stone axe. L. 7.8 cm, W. 4.2 cm, Th. 2.8 cm. Inv. no. 88.48.7 *(Pl. 20. 4)*.

**Grave 388** (Trench x/6; *Pl. 21*)

The grave enclosed by four stones lay at a depth of 185 cm. The calcined bones strewn on the ground were covered with a bowl (1), beside which lay a small bowl (3) with the mouth downward. A jug (2) lay in the burial's northern part, in part under the trench wall. Originally set upright, the vessel had been crushed by the weight of the earth. Fragments of a broken pot (4) lay in the burial's southern part.

A thin-walled jug (5) deposited with the mouth downward was found west of the stones alongside smaller pottery sherds from other vessels (6–12).

The calcined bone fragments from the grave weighed 107.8 g. The remains came from a 15–30-year-old juvenile or adult, whose sex could not be determined.

Grave goods

1. Bowl. Funnel-necked, conical bowl. The exterior is coarsened and decorated with four small knobs on the shoulder. The rim interior is covered with dense, slightly oblique, short channelling. The vessel body has two perforations on the shoulder. The surface is strongly worn. Refitted and restored. H. 13 cm, dM. 36 cm, dB. 9.5 cm. Inv. no. 88.49.1 *(Pl. 21. 3)*.
2. Jug. Jug with slightly incurving neck and squat, globular body, decorated with three subcutaneous handles formed towards the vessel interior and sixteen lobes pressed out from the interior. The surface is strongly worn and it is therefore uncertain whether the body was additionally decorated. The rim is chipped, the handle is missing. H. 11.2 cm, dM. 10.5 cm, dB. 5.5 cm. Inv. no. 88.49.2 *(Pl. 21. 6)*.
3. Lid. Miniature conical lid fired to a light brown colour, decorated with an incised circle and five radially arranged herringbone motifs. The surface is strongly worn. H. 1.8 cm, diam. 6.5 cm. Inv. no. 88.49.3 *(Pl. 21. 1)*.
4. Dish-pot. Large, thick-walled vessel with oval mouth and base, and asymmetric body. A row of fingertip impressions runs under the rim. The body is coarsened. Refitted and restored. H. 16.5–17.5 cm, dM. 27 and 37.5 cm, dB. 12.5 and 17 cm. Inv. no. 88.49.4 *(Pl. 21. 10)*.

5. Jug. Rim and body fragments of a thin-walled jug with squat, globular body, decorated with vertical ribs and oblique channelling. The surface was originally polished. Six fragments, each refitted from several smaller pieces. Diam. of belly 10 cm. Inv. no. 88.49.5 *(Pl. 21. 2)*.
6. Pot (?). Body fragment of a reddish pot (?) decorated with a herringbone motif. H. 6.5 x 5.7 cm. Inv. no. 88.49.6 *(Pl. 21. 4)*.
7. Pot. Rim fragment of a poorly-preserved, thin-walled pot, decorated with a finger-impressed cordon around the neck. 2.7 x 2.3 cm. Inv. no. 88.49.10 *(Pl. 21. 12)*.
8. Bowl. Body fragment of a greyish, thin-walled bowl, decorated with an incised comb-like pattern. The surface is worn. Refitted. 7.3 x 6.5 cm. Inv. no. 88.49.7 *(Pl. 21. 5)*.
9. Jug. Rim, body and base fragments of a plain, greyish-brown, thin-walled jug with incurving neck and rounded body. The surface is strongly worn. Three fragments, one refitted from several smaller ones. Three fragments. Inv. no. 88.49.8 *(Pl. 21. 7)*.
10. Pot (?). Body fragments of a large, thick-walled, reddish pot, decorated with herringbone motifs. The surface is worn. Three fragments. Inv. no. 88.49.9 *(Pl. 21. 9)*.
11. Bowl. Rim and body fragment of a reddish semi-spherical bowl, decorated with a row of punctates around the shoulder and an incised zig-zag line underneath. The surface is strongly worn. 4.7 x 6 cm. Inv. no. 88.49.11 *(Pl. 21. 8)*.
12. Bowl. Rim, body and base fragments of a small, funnel-necked, plain bowl. The surface is worn. Four fragments, two refitted from several smaller ones. dB. 6.5 cm Inv. no. 88.49.12 *(Pl. 21. 11)*.

**Grave 389** (Trench zs/6)

The stones indicating the presence of a grave lay at a depth of 200 cm in the trench's northern part. A few pottery sherds (1–3) were found under a rectangular stone packing of seventeen-eighteen stones measuring 70 cm by 60 cm.

Grave goods

1. Mug. Rim fragment of a mug with a short, furrowed strap handle. The surface is worn. Refitted. 4.1 x 3.4 cm. Inv. no. 88.50.1 *(Pl. 20. 9)*.
2. Jug (?). Rim fragment of a brownish, thin-walled jug with a handle rising above the rim. The surface is strongly worn. 5 x 3.6 cm. Inv. no. 88.50.2 *(Pl. 20. 8)*.
3. Pot (?). Body and base fragments of a large, reddish pot (?). The surface is worn. Refitted. 12 x 11.5 cm. Inv. no. 88.50.3 *(Pl. 20. 10)*.

**Grave 390** (Trenches z/4–z/5; *Pl. 22*)

The outermost stones of the roughly circular stone packing measuring 2.8–3 m in diameter were somewhat larger. The ashes were deposited at a depth of 160 cm, under the middle of the stone packing. A large cordon- and knob-decorated vessel (1), probably with the mouth downward, was placed beside the ashes together with a jug (?) (2). The vessels were crushed by the weight of the earth to the extent that their original position could not be accurately determined. A smaller vessel (3) lay in the grave's south-eastern part. A small vessel fragment (4) decorated in the *Furchenstich* style lay some 50 cm away from the small heap of sherds, at the same depth as the vessels. No other similar fragments were found, suggesting that it had not been part of the grave inventory and that it had probably become buried or had been discarded earlier.

Two other small pottery sherds (5–6) decorated in the *Furchenstich* style were found by one of the stones adjacent to the vessels, lying 5 cm deeper than the other vessel fragments. It seems likely that these sherds were not deposited at the time of the burial, but had become buried earlier. The ashes lay deeper because a small hollow had probably been scooped out in the ground for them into which they were deposited (although it must be noted that this hollow could not be observed in the brownish earth during the excavation). Two indistinct body fragments (7–8) were found underneath the grave when the soil was turned over to a depth of 20 cm, where the earth graded into the yellow subsoil.

A cluster of sherds was found among some scattered stones east of the stone packing of Grave 390. This assemblage was labelled Grave 390/a (see below).

The calcined bone fragments from Grave 390 weighed 50.7 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Amphora. Biconical amphora with incurving neck and rounded body, decorated with a triple, nail-impressed cordon around the shoulder and a row of small round knobs underneath (of which there had originally been ten). The surface is strongly worn. The rim is chipped. Refitted and restored. H. 40 cm, dM. 15–16 cm, dB. 12.5 cm. Inv. no. 88.51.1 *(Pl. 22. 2)*.
2. Suspension vessel. Greyish-brown biconical vessel with short, cylindrical neck, decorated with a double row of punctates around the shoulder and three symmetrically placed vertical string-hole lugs handles on the belly. The surface is strongly worn. The rim is chipped. Refitted and restored. H. 13-14 cm, dM. 8.5 cm, dB. 6 cm. Inv. no. 88.51.2 *(Pl. 22. 8)*.
3. Beaker. Rim fragments of a greyish, thin-walled beaker with elongated S profile. One fragment indicated that the beaker had a peaked rim. A row of punctates runs under the rim. Two fragments, each refitted from several smaller ones. 6.8 x 5.7 cm and 4 x 7.1 cm, dM. *ca*. 10 cm. Inv. no. 88.51.3 *(Pl. 22. 3)*.
4. Body fragment[76] of a light brownish vessel, decorated with a pattern created from bundles of oblique lines running in opposite directions made with the stab-and-drag technique. Remnants of the lime encrustation survive in some spots. 5.1 x 6.4 cm. Inv. no. 88.51.8 *(Pl. 22. 5)*.
5. Body fragment[77] of a brownish vessel, decorated with an incised patterns. The surface is worn. 1.6 x 2 cm. Inv. no. 88.51.9 *(Pl. 22. 6)*.
6. Body fragment of a brownish vessel, decorated with a lattice pattern. 2.6 x 3.8 cm. Inv. no. 88.51.10 *(Pl. 22. 7)*.
7. Amphora. Rim and body fragments of a brownish amphora with incurving neck and ovoid body, decorated with a triple row of punctates around the neck and an incised zig-zag pattern underneath. Three fragments, each refitted from several smaller ones. Inv. no. 88.51.7 *(Pl. 22. 1)*.
8. Pot. Rim and body fragments of a brownish-grey, thin-walled pot, decorated with a row of punctates under the rim. Refitted from smaller fragments. 9.2 x 9.9 cm. Inv. no. 88.51.5 *(Pl. 22. 4)*.

**Grave 390/a** (Trench z/5; *Pl. 23*)

A cluster of sherds was found among some scattered stones east of the stone packing of Grave 390. This assemblage was labelled Grave 390/a. The pottery sherds comprised the fragments of a bowl (9), the fragments of a conical vessel (10–11) and the fragments of a bowl deposited upside down (12). Only the fragments of the latter vessel survived without loss.

[76] TORMA 1973, Abb. 12. 1.
[77] TORMA 1973, Abb. 12. 2.

The calcined bone fragments from Grave 390/a weighed 11.7 g. The remains came from a 1–5-year-old infant or child.

Grave goods

9. Bowl. Rim and body fragments of a reddish-brown, funnel-necked bowl. The interior is plain, the exterior is decorated with a row of stabs encircling the shoulder, underneath which the vessel surface is coarsened. Two fragments, each refitted from several smaller ones. 15.2 x 18 cm, H. 9.1 cm. dM. 32 cm. Inv. no. 88.51.4 *(Pl. 23. 1)*.
10. Pot. Rim fragments of a small, greyish-brown pot, decorated with a finger-impressed cordon under the rim and a pair of small round knobs underneath. Two fragments. 2.8 x 3.3 cm, 2.6 x 3.1 cm. Inv. no. 88.51.6 *(Pl. 23. 2)*.
11. Beaker. Rim and body fragments of a conical beaker, decorated with stabs under the rim and a divided knob. Refitted. DM. 12.5 cm. Inv. no. 88.51.11 *(Pl. 23. 3)*.
12. Bowl. Brownish, worn, semi-spherical bowl with decorated interior and exterior. The rim is covered with short vertical channelling. The exterior is decorated with dense vertical combing from the shoulder downward, occasionally combined with tiny impressed dots at the end of the lines. A small vertical string-hole lug is set on the body. The interior is divided into fields filled with oblique channelling in alternating directions, separated by triple grooves. H. 9 cm, dM. 25.5–26 cm, dB. 6 cm. Refitted *(Pl. 23. 4)*.

**Grave 391** (Trench z/4; *Pl. 25*)

The calcined bones and the few indistinct pottery sherds beside them lay at a depth of 145 cm under the middle of the stone packing, partly made up of large stones, measuring 3.5 m by 3.2 m. Lying under the northern edge of the stone packing was a broken pot (1) and the fragments of a semi-spherical bowl (2) and a bowl with outturned rim (3) to its east. Some pieces of the vessels were missing, suggesting that they had been deposited in a fragmented condition. A few bowl fragments (4) were found under a larger stone on the western side of the stone packing, while a few sherds (5–9) came to light by its southern edge. The latter were perhaps part of the grave inventory of Grave 430 uncovered later in Trench z/3 during the 1969 season, but unexcavated at the time.

The calcined bone fragments from the grave weighed 71.8 g. The age and sex of the deceased could not be determined.

Grave goods

1. Pot. Rim, body and base fragments of a brownish pot with elongated S profile, decorated with a slender, grooved cordon under the rim. One fragment has a vertically set string-hole lug. The originally coarsened surface is strongly worn. Two fragments, each refitted from smaller pieces. H. 13.5 cm, dM. *ca*. 28 cm. dB. 10 cm. Inv. no. 88.52.1 *(Pl. 25. 9)*.
2. Bowl. Rim and body fragments of a semi-spherical bowl with plain exterior. The rim is covered with dense vertical channelling. The interior is divided into fields by pairs of radially channelled lines. The fields are filled with oblique channelling forming V motifs. Three fragments, each refitted from smaller pieces. dM. 33 cm. Inv. no. 88.52.2 *(Pl. 25. 4)*.
3. Bowl. Plain, thin-walled, funnel-necked bowl. The originally polished surface is strongly worn. Refitted and restored. H. 9–9.5 cm, dM. 27.5 cm, dB. 7 cm. Inv. no. 88.52.3 *(Pl. 25. 1)*.
4. Bowl. Body fragment of a brownish, plain, funnel-necked bowl. The surface was originally polished. Refitted from smaller fragments. 10.5 x 11.2 cm. Inv. no. 88.52.4 *(Pl. 25. 3)*.

5. Vessel. Body fragment of the lower part of a brownish, thin-walled vessel, decorated with obliquely incised lines. Refitted from smaller fragments. 6 x 4.8 cm. Inv. no. 88.52.5 *(Pl. 25. 5)*.
6. Bowl (?). Rim and body fragment of a plain, dark greyish bowl. The surface was originally polished. Refitted from smaller fragments. 7 x 5.8 cm. Inv. no. 88.52.6 *(Pl. 25. 6)*.
7. Bowl (?). Body fragment of a greyish-brown bowl with strongly worn surface. Refitted from smaller fragments. 5.5 x 6.1 cm. Inv. no. 88.52.7 *(Pl. 25. 7)*.
8. Pot. Body fragment of a reddish-brown, thin-walled miniature pot decorated with an incised lattice pattern. 3.9 x 4.2 cm. Inv. no. 88.52.8 *(Pl. 25. 2)*.
9. Bowl. Rim fragment of a plain, greyish, semi-spherical bowl with strongly worn surface. 4.6 x 7.8 cm. Inv. no. 88.52.9 *(Pl. 25. 8)*.

**Grave 392** (Trench zs/4; *Pl. 20*)

The calcined bones lay in a heap 135 cm deep under a roughly semi-circular, loose stone packing with a diameter of 2.5 m. A cordon-decorated amphora (1) tilted to one side lay beside the bones. The poorly-fired vessel was crushed into tiny fragments under the stones.

The calcined bone fragments from the grave weighed 29.1 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Amphora. Amphora with rounded body, decorated with a pair of grooved cordons around the shoulder and symmetrically placed round knobs underneath (of which three survive). Two short strap handles are placed opposite each other on the belly. Refitted and restored. H. 25.5 cm, dM. 11.2 cm, dB. 9.3 cm. Inv. no. 88.53.1*(Pl. 20. 12)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

2. Bowl. Rim and body fragment of a small, greyish-brown, funnel-necked bowl. The surface is strongly worn. Refitted from smaller fragments. 8.8 x 13.8 cm. dM. 21 cm. Inv. no. 88.53.2 *(Pl. 20. 14)*
3. Mug. Rim and body fragment of a reddish-brown, grey mottled mug with incurving neck and squat, globular body, decorated with channelling, now worn, on the belly. The surface is strongly worn. 4.9 x 3.3 cm. Inv. no. 88.53.3 *(Pl. 20. 13)*.
4. Amphora. Body fragments of a large, reddish-brown, thick-walled amphora. Four pieces, each refitted from smaller fragments. Inv. no. 88.53.4 *(Pl. 20. 11)*.

**Grave 393** (Trench zs/4; *Pl. 26*)

The burial was indicated by pottery sherds broken into tiny fragments lying under the round stone packing with a diameter of 1.5 m made up of mostly larger stones. One interesting feature of the stone packing was the lack of stones in an area measuring 40 cm in diameter in the stone packing's middle. The fragments of a pot (1) deposited with the mouth downward and the fragments of a handled mug (2) lay in the middle. In addition to the fragments of a handled, cordon-decorated vessel (3) and the rim fragments of a bowl (4), the finds included fragments of thick-walled vessels from the grave's middle and southern side (5–7), and its northern side (8).

The calcined bone fragments from the grave weighed 11 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Pot. Brownish pot with elongated S profile, decorated with a row of impressed dots under the rim. The surface is coarsened. Refitted and restored. H. 17.5 cm, dM. 18 cm, dB. 8.7 cm. Inv. no. 88.54.1 *(Pl. 26. 1)*.
2. Mug. Rim and body fragments of a squat, globular mug with slightly incurving neck and a wide furrowed strap handle, decorated with channelling. The body is decorated with vertical channelling to the handle's left side and with delicate channelling arranged into triangles with the tips pointing in opposite directions to its right side. Refitted. H. of fragment 6.5 cm, dM. 6.8 cm. Inv. no. 88.54.2 *(Pl. 26. 2)*.
3. Amphora. Rim and body fragments of a large, reddish-brown, thick-walled amphora, decorated with a grooved double cordon around the shoulder and a short, lightly furrowed strap handle underneath. Refitted. Twelve fragments. Inv. no. 88.54.3 *(Pl. 26. 8)*.
4 Bowl. Rim and body fragments of a plain, slightly funnel-necked bowl. The surface is strongly worn. The rim interior was originally decorated with vertical channelling. Two fragments, one refitted from smaller pieces. 7.1 x 10.8 cm, 7.4 x 9.8 cm. dM. 20 cm. Inv. no. 88.54.4 *(Pl. 26. 5)*.
5. Amphora. Rim and body fragment of a brownish-grey amphora with incurving neck, decorated with a grooved double cordon. 6.4 x 9.3 cm. Inv. no. 88.54.5 *(Pl. 26. 3)*.
6. Bowl. Rim fragment of a large, funnel-necked bowl, decorated with wide vertical channelling on the rim interior. The surface is worn. 6.7 x 5.2 cm. Inv. no. 88.54.6 *(Pl. 26. 6)*.
7. Bowl. Rim fragment of a large, reddish, funnel-necked bowl, decorated with a row of impressed dots around the shoulder and wide vertical channelling on the rim interior. 4.9 x 6.4 cm. Inv. no. 88.54.7 *(Pl. 26. 4)*.
8. Fragment of a coarse vessel *(Pl. 26. 7)*.[78]

**Grave 394** (Trenches zs/4–zs/5; *Pl. 25*)

The calcined bones lay in one heap at a depth of 150 cm under a roughly rectangular stone packing measuring 2.5 m by 2 m. The fragments of a bowl (1) formed a heap near the bones. The other finds from the grave include a few indistinct pottery sherds (2–3). The fragment of a handled pot (4) lay under the northern edge of the stone packing. An oval ring of seven to eight stone measuring 0.8 m by 0.5 m adjoined the north-eastern side of the stone packing. It relation to the grave remains enigmatic.

The calcined bone fragments from the grave weighed 25.1 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Rim fragments of a short-necked, conical bowl. Plain, with strongly worn surface. Three fragments, one refitted from smaller sherds. Inv. no. 88.55.2 *(Pl. 25. 13)*.
2. Bowl. Rim fragment of a greyish, thin-walled, semi-spherical bowl, bearing a stab on the exterior (not part of a decoration). The surface is strongly worn. 4.5 x 4.9 cm. Inv. no. 88.55.3 *(Pl. 25. 11)*.
3. Bowl. Rim fragment of a plain, thin-walled, semi-spherical bowl. The surface is strongly worn. 6.4 x 6.1 cm. Inv. no. 88.55.4 *(Pl. 25. 10)*.

[78] Although the vessel itself can no longer be found, we did locate a drawing of it.

4. Pot. Rim fragment of a brownish, thin-walled pot with elongated S profile and a short strap handle springing from the rim. The surface is strongly worn. 5.2 x 5.7 cm. Inv. no. 88.55.1 *(Pl. 25. 12)*.

**Grave 395** (Trench zs/5; *Pl. 25*)

A single calcined bone fragment lay underneath the round stone packing with a diameter of 1.7–2 m. The stone packing was made up of mostly large stones and lay at a depth of 1.46 m. A miniature bowl (1) lay among the stones. Small fragments of several Boleráz vessels (2–6) lay on and beside the stone packing. The undisturbed yellow subsoil lay 5 cm under the stones.

The calcined bone fragments from the grave weighed 0.1 g. The age and sex of the deceased could not be determined.

Grave goods

1. Miniature bowl. Brownish, thin-walled, semi-spherical bowl. The plain vessel was very poorly preserved. Refitted from smaller fragments. H. 2 cm, dM. 5 cm. Inv. no. 88.56.1 *(Pl. 25. 15)*.
2. Bowl. Rim and body fragment of a large, greyish-brown, funnel-necked bowl. The exterior is coarsened, the rim interior is decorated with fields alternately filled with vertical and oblique channelling. The originally polished surface is strongly worn. Refitted from smaller fragments. 15 x 12.5 cm. Inv. no. 88.56.2 *(Pl. 25. 19)*.
3. Pot. Rim fragment of a small brownish pot with elongated S profile, decorated with a slender, grooved cordon under the rim. 3.6 x 4.1 cm. Inv. no. 88.56.3 *(Pl. 25. 18)*.
4. Bowl. Body fragment of a greyish, thin-walled bowl, decorated with dense vertical combing on the exterior. The surface is worn. 5.4 x 9.4 cm. Inv. no. 88.56.4 *(Pl. 25. 14)*.
5. Mug. Rim and body fragment of a small, thin-walled mug with squat, globular body. There is no indication of any decoration. The surface is strongly worn. Refitted from smaller fragments. 2.9 x 4.2 cm. Inv. no. 88.56.5 *(Pl. 25. 17)*.
6. Mug. Body fragment of a brownish mug, decorated with wide oblique channelling. 3.5 x 4.3 cm. Inv. no. 88.56.6 *(Pl. 25. 16)*.

**Grave 396** (Trenches x/4–x/5; *Pl. 27*)

The grave was covered with an oval stone packing of large stones. The packing measured 2 m by 1.5 m and lacked stones in its middle. The calcined bones were covered with a bowl with outturned rim (1), a semi-spherical bowl (2) and a few pottery sherds (3–6).

The calcined bone fragments from the grave weighed 5.3 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Funnel-necked bowl decorated with dense, vertical combing on the belly. The neck interior is covered with a design made up of alternating vertical and oblique channelling. The base interior is divided into four fields filled with vertical and oblique channelling. The surface was originally polished. The rim is chipped. Refitted and restored. H. 8.3–10.7 cm, dM. 30 cm, dB. 7.5 cm. Inv. no. 88.57.1 *(Pl. 27. 6)*.
2. Bowl. Rim and body fragments of a thin-walled, semi-spherical bowl, decorated with a narrow groove under the rim. The interior is divided into fields by vertical channelled lines. The fields are filled with channelling arranged into herringbone motifs. The originally polished surface is

strongly worn. Two fragments, refitted from smaller ones. 4.1 x 5.8 cm, 11.7 x 16 cm. Inv. no. 88.57.2 *(Pl. 27. 5)*.

3. Pot. Rim fragment of a small, brownish pot with elongated S profile, decorated with a slender, finger-impressed cordon and a broken knob handle. 3.5 x 5.2 cm. Inv. no. 88.57.3 *(Pl. 27. 2)*.
4. Bowl. Body fragment of a small, thin-walled bowl decorated with an incised zig-zag pattern. 2.9 x 3 cm. Inv. no. 88.57.4 *(Pl. 27. 4)*.
5. Jug. Body and handle fragments of a thin-walled, squat, globular jug, decorated with oblique channelling on the belly. The surface is strongly worn. Two fragments, each refitted from smaller ones. 3 x 5.4 cm, 2.3 x 5.6 cm. Inv. no. 88.57.5 *(Pl. 27. 1)*.
6. Bowl (?). Body and base fragments of a plain, brownish, thin-walled bowl. The surface is strongly worn. Two fragments. 4.5 x 3.7 cm, 5.4 x 7.6 cm. dB. 5.5 cm. Inv. no. 88.57.6 *(Pl. 27. 3)*.

**Grave 397** (Trenches zs/5–zs/6; *Pl. 27*)

A bowl (1) deposited with the mouth downward was found under four stones lying on the boundary of the two trenches. The grave did not contain any calcined bones.

Grave goods

1. Bowl. Funnel-necked bowl with a gently curved profile. It is decorated with a row of punctates around the shoulder and a vertical zig-zag pattern underneath. The neck interior is covered with oblique channelling in alternating directions. Refitted and restored. The rim is chipped. H. 11.3 cm, dM. 26 cm, dB. 9 cm. Inv. no. 88.58.1 *(Pl. 27. 7)*.

**Grave 398** (Trench x/5)

The grave covered with a stone packing measuring 2–2.5 m in diameter contained a handful of pottery sherds (1–5) aside from the calcined bones. Graves 398, 399 and 400 formed one group, with overlapping stone packings. A mussel fragment was identified among the calcined bones during their examination.

The calcined bone fragments from the grave weighed 19.2 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Pot. Rim fragment of a brownish pot with elongated S profile, decorated with a finger-impressed cordon under the rim. 5 x 3.9 cm. Inv. no. 88.59.1 *(Pl. 27. 10)*.
2. Pot. Rim fragment of a pot with elongated S profile, decorated with a row of stabs and a pair of finger-impressed cordons under the flat rim. 3.6 x 3.8 cm. Inv. no. 88.59.2 *(Pl. 27. 11)*.
3. Pot. Rim and body fragment of a brownish pot with strongly elongated S profile, decorated with a finger-impressed cordon under the rim. 5.7 x 5.3 cm. Inv. no. 88.59.3 *(Pl. 27. 9)*.
4. Bowl. Rim fragments of a plain, strongly worn, funnel-necked bowl. Five fragments, three of which could be refitted. Inv. no. 88.59.4 *(Pl. 27. 8)*.
5. Bowl. Rim fragment of a small, greyish, thin-walled, semi-spherical bowl, decorated with grooving under the rim. The surface is strongly worn. Refitted from smaller fragments. 4.1 x 1.6 cm. Inv. no. 88.59.5 *(Pl. 27. 12)*.

**Grave 399** (Trenches x/5 and y/5 *Pl. 23*)

The greater part of the stone packing found at a depth of 160 cm extended into Trench y/5, which was still unexcavated in the 1969 season. The grave section excavated in 1969 did not yield any finds.

The greater part of the stone packing with a diameter measuring over 3 m was found at a depth of 165 cm in the western part of Trench y/5 in 1971. A part of the stone packing overlapped with the stones of the packing over Graves 398 and 400. The calcined bones lay under the middle of the stone packing, at a depth of 197 cm. A large, two-handled vessel (1) and a larger (2) and smaller funnel-necked bowl (3) as well as a semi-spherical bowl (4) were placed above the calcined bones. The fragments of another bowl (5) lay on the grave's north-western edge. The fragments of a broken jug (6) were dislodged from their original position on the grave's south-western edge when the stones were lifted, Fragments of two or three vessels (7–11), the handle of a pannier vessel (8) among them, lay under the edge of the stone packing. A cattle (?) mandible fragment was found by the southern edge of the stone packing.[79]

The calcined bone fragments from the grave weighed 115.9 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Storage jar. Reddish-grey, wide-mouthed storage jar with elongated S profile, decorated with a pair of grooved cordons around the shoulder. Two vertically perforated, doubly-furrowed strap handles are set on the belly. The surface is strongly worn. Refitted and largely restored (the base is wholly restored). H. 27.5 cm, dM. 33.5 cm, dB. 10.5 cm. Inv. no. 88.60.1 *(Pl. 24. 7)*.
2. Bowl. Rim and body fragments of a large, thick-walled, funnel-necked bowl. The exterior is plain, the rim interior is decorated with wide vertical channelling. The surface is strongly worn. Refitted. Three fragments. Inv. no. 88.60.2 *(Pl. 23. 7)*.[80]
3. Bowl. Rim, body and base fragments of a plain, funnel-necked bowl. The surface is strongly worn. Refitted. H. 4.7 cm, dM. 22 cm. Inv. no. 88.60.3 *(Pl. 23. 6)*.
4. Bowl. Fragments of a semi-spherical bowl with indrawn rim and omphalos base. The base interior is decorated with concentric channelling. Refitted and restored. H. 12.5 cm, dM. 30 cm, dB. 7.5 cm. Inv. no. 88.60.4 *(Pl. 24. 6)*.
5. Bowl. Rim, body and base fragments of a funnel-necked bowl, with strongly worn channelling in its interior. The exterior is decorated with a row of punctates encircling the shoulder, interrupted in one spot by a small round knob. The surface is strongly worn. Refitted. Nine fragments. H. of fragment 8.5 cm, dM. 290 cm. Inv. no. 88.60.5 *(Pl. 24. 5)*.
6. Jug. Rim and body fragments of a brownish, thin-walled jug with incurving neck and squat body, decorated with slender, vertical ribs and channelling. The pattern cannot be reconstructed from the fragments. Refitted. Three fragments. dM. 9 cm. Inv. no. 88.60.6 *(Pl. 24. 3)*.
7. Pot. Rim fragments of a small, thin-walled pot with elongated S profile, decorated with a double row of punctates under the rim and a row of knobs underneath. The short strap handle springs from the rim and is flanked by two small round knobs. Three fragments. Inv. no. 88.60.7 *(Pl. 24. 1)*.
8. Pannier vessel. Body fragment of a large, thick-walled pannier vessel with a slightly peaked handle. 4.5 x 7.3 cm. Inv. no. 88.60.8 *(Pl. 24. 4)*.

[79] Only the teeth remained by the time the animal bones were examined. See Erika Gál's study, in this volume (pp. 367–379).

[80] The inscription on the vessel ("Grave 399 vessel 1") is erroneous.

9. Amphora. Body fragment of a large, thick-walled amphora, decorated with a small round knob on the shoulder and a double row of nail impressions underneath. The surface is worn. 7.4 x 9.2 cm. Inv. no. 88.60.9 *(Pl. 23. 5)*.
10. Dish-pot. Rim fragment of a large, thick-walled, semi-spherical dish-pot, decorated with a pair of slender, nail-impressed cordons and a large, unperforated, furrowed handle on the belly. Refitted from smaller fragments. 16.5 x 18.5 cm. Inv. no. 88.60.10 *(Pl. 24. 2)*.
11. Jug. Body and handle fragments of a light brownish, thin-walled jug, decorated with fields of oblique channelling in alternating directions and two vertical, inward-thickening subcutaneous handles on the belly. The furrowed handle has a triangular section. Three fragments, each refitted from smaller ones. Inv. no. 88.60.11 *(Pl. 23. 8)*.

**Grave 400** (Trench x/5; *Pl. 28*)

The calcined bones lay scattered at a depth of 167 cm under the round stone packing with a diameter of 2–2.5 m. A part of the stone packing overlapped with the packing of Graves 398 and 399. The vessels deposited in the grave were probably in a broken condition already at the time of the burial because some fragments of the same vessel lay far from each other. It was rather difficult to determine the original location of the vessels in the grave owing to their broken condition. The grave pottery was made up of a bowl (1) deposited with the mouth downward, a semi-spherical bowl (2) deposited in a similar manner, fragments of a two-handled vessel (3) and a jug (4) broken into tiny fragments. The yellow subsoil lay 4–5 cm under the calcined bones.

The calcined bone fragments from the grave weighed 30.6 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Bowl. Reddish, funnel-necked, conical bowl with slightly coarsened exterior. The rim interior is decorated with pronounced channelling arranged in a triangle pattern. Refitted and restored (the base is wholly restored). H. 14–15.5 cm, dM. 35 cm, dB. 8 cm. Inv. no. 88.61.1 *(Pl. 28. 4)*.
2. Bowl. Plain semi-spherical bowl with slightly wavy rim. The originally polished surface is strongly worn. Refitted and restored. H. 9.5–10 cm, dM. 26.5 cm, dB. 9–10.5 cm. Inv. no. 88.61.2 *(Pl. 28. 2)*.
3. Amphora. Rim and body fragments of an ovoid amphora with slightly incurving neck, decorated with a finger-impressed double cordon around the shoulder and an ornamental row of small round knobs underneath. A furrowed strap handle spans the belly. Four fragments, refitted from smaller ones. dM. 12 cm. Inv. no. 88.61.3 *(Pl. 28. 1)*.
4. Jug. Fragments of a jug with short, incurving neck and squat, globular body, decorated with oblique channelling in alternating directions arranged in a triangle pattern and a vertically perforated subcutaneous handle towards the vessel interior. The strap handle has a double furrow. The surface is strongly worn. Refitted and restored. Five fragments. H. 10 cm, dB. 6 cm. Inv. no. 88.61.4 *(Pl. 28. 3)*.

**Grave 401** (Trenches 1/3–y/3; *Pl. 29*)

The grave lay on the edge of Trench 1/3, with the greater part of its round stone packing extending into Trench y/3. One part of the grave was excavated in the 1969 season, while its greater portion in the 1970 season. A broken jug (1) lay at a depth of 120 cm, directly under the stones in the grave part excavated in 1969. The stone packing measuring 2–2.5 m in diameter lay at a depth of 139 cm in the grave part

excavated in 1970. The broken vessels were found immediately underneath the stones. Two bowls (2–3) deposited with the mouth downward were wholly crushed by the stones. The fragments of a pot (4) lay beside the bowls under the trench wall. Six clay rollers (5–10), one of which was broken, lay beside each other north-east of the bowl. A few smaller sherds were found towards the edge of the stone packing.

Grave goods

1. Jug. Rim and body fragments of a brownish biconical jug with incurving neck, decorated with pronounced oblique channelling in alternating directions arranged in a triangle pattern. There is a vertical subcutaneous handle towards the vessel interior on the fragment. The originally polished surface is strongly worn. Two fragments. 5 x 5.9 cm, 6 x 4.8 cm. Inv. no. 88.62.1 *(Pl. 29. 3)*.
2. Bowl. Rim and body fragments of a funnel-necked, conical bowl, decorated with short vertical channelling on the rim exterior and oblique channelling in alternating directions arranged in a triangle pattern on the rim interior. The surface is strongly worn. Fourteen fragments. dM. 25 cm. Inv. no. 88.62.2 *(Pl. 29. 5)*.
3. Bowl. Plain, brownish-red, semi-spherical bowl. Refitted and restored to a small extent. H. 10.3–13 cm, dM. 29.5–30 cm, dB. 9 cm. Inv. no. 88.62.3 *(Pl. 29. 4)*.[81]
4. Pot. Rim fragment of a large, thick-walled pot with elongated S profile, decorated with a row of stabs along the edge of the slightly thickened rim and a small round knob underneath. 7.1 x 7.3 cm. Inv. no. 88.62.4 *(Pl. 29. 2)*.

5–10. Rollers. Brownish, cylindrical rollers with curved side, without any traces of use-wear. Six pieces, one is broken. L. of intact pieces 5.4 cm, L. of broken piece 2.9 cm, diam. of thickened section 2.5–3.1 cm, diam. in the middle 1.7–2.1 cm. Inv. no. 88.62.5 *(Pl. 29. 1)*.

**Grave 402** (Trench 1/3; *Pl. 29*)

The grave lacked a stone packing. The small fragments of several vessels (1–8) were scattered over a 1 m by 0.5 m large area, without any apparent pattern. No calcined bone fragments were found. Depth: 130 cm.

Grave goods

1. Jug. Light brownish jug with squat, globular body and furrowed strap handle. The belly is divided into lobes pressed out from the vessel interior and separated by vertical channelling. The lobes are covered with oblique channelling. Two of the three subcutaneous handles survive. The surface is strongly worn. Refitted and restored. H. 9.5 cm, dM. 6.5 cm, dB. 4.7 cm. Inv. no. 88.63.1 *(Pl. 29. 13)*.
2. Pot. Rim fragment of a small, thin-walled pot with elongated S profile, decorated with a grooved cordon under the slightly thickened, outturned rim and an incised herringbone pattern underneath. 4.7 x 4.6 cm. Inv. no. 88.63.2 *(Pl. 29. 6)*.
3. Pot. Rim fragment of a small, brownish pot, decorated with grooving on the slightly thickened rim and a finger-impressed cordon underneath. 3.6 x 4.1 cm. Inv. no. 88.63.3 *(Pl. 29. 11)*.
4. Mug. Body fragment of a mug with cylindrical neck and squat, globular body, decorated with wide vertical channelling on the belly. The originally polished surface is strongly worn. 5.9 x 4.6 cm. Inv. no. 88.63.4 *(Pl. 29. 9)*.

[81] Identified on the basis of the conservation diary.

5. Pot. Rim and body fragments of a reddish-brown pot with elongated S profile and coarsened surface. Four fragments, each refitted from smaller pieces. dM. *ca*. 40 cm. Inv. no. 88.63.5 *(Pl. 29. 8)*.
6. Bowl. Rim fragment of a semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim and a groove under the rim. The surface is strongly worn. 3.7 x 6.5 cm. Inv. no. 88.63.6 *(Pl. 29. 10)*.
7. Bowl. Rim and body fragment of a brownish, funnel-necked bowl with outcurving rim. The exterior is coarsened. 9.6 x 10.8 cm. Inv. no. 88.63.7 *(Pl. 29. 12)*.
8. Handle. Light-brownish, strongly worn furrowed handle of a jug (?). 2.1 x 5.1 cm. Inv. no. 88.63.8 *(Pl. 29. 7)*.

**Grave 403**[82] (Trenches 1/3–2/3; *Pl. 30*)

The triangular stone packing covered an area measuring 3 m by 2.5 m. A 1.9 m long curved row of stones of unknown function projected from its south-eastern edge. Four bowls (1–4) with their mouth downward lay under the stone packing. A jug (5) stood among the bowls in the middle of the grave. All vessels were crushed into tiny fragments by the weight of the earth. Animal bones[83] (the lower mandible and the leg bone of a dog) and a small vessel (6) turned upside down lay by the northern edge of the stone packing.

The calcined bone fragments from the grave weighed 7.9 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Bowl. Semi-spherical bowl. Plain, save for the short, vertical channelling covering the rim, now worn. The surface is strongly worn. Refitted and restored. H. 12–12.5 cm, dM. 28.5 cm, dB. 9.4 cm. Inv. no. 88.64.1 *(Pl. 30. 2)*.
2. Bowl. Funnel-necked, conical bowl, decorated with a row of impressions and two small knobs around the shoulder and channelling in alternating directions arranged in a triangle pattern on the rim interior. The base interior is divided into four fields filled with horizontal and vertical channelling. The originally polished surface is strongly worn. Refitted and restored. H. 10.5–11 cm, dM. 30 cm, dB. 9 cm. Inv. no. 88.64.2 *(Pl. 30. 3)*.
3. Bowl. Large, oval-mouthed, funnel-necked, conical bowl. The rim is pinched downward into a spout-like form in one spot. The exterior is pitted, the rim interior is covered with dense vertical channelling. The surface is strongly worn. Refitted and restored. H. 13–14 cm, dM. 36 cm, dB. 9.5 cm. Inv. no. 88.64.3 *(Pl. 30. 5)*.
4. Bowl. Rim and body fragments of a reddish-grey, semi-spherical bowl. The exterior is plain, the perforated handle broke off. The rim is densely covered with short vertical channelling. Bundles of three (in one case, four) vertical channelled lines divide the vessel interior into fields which are filled with oblique channelling in alternating directions. The originally polished surface is strongly worn. Two fragments, each refitted from smaller ones. 21.2 x 11.8 cm, 11.2 x 16.5 cm. dM. 32 cm. Inv. no. 88.64.4 *(Pl. 31. 1)*.
5. Jug. Jug with slightly incurving neck and squat, globular body. Three vertical subcutaneous handles formed towards the vessel interior, but also slightly prominent, are set on the belly. The lobed belly

[82] TORMA 1973, Abb. 1. 44, with a photo of the grave.
[83] The finds included also the broken left valve of an *Unio crassus* mussel.

is decorated with vertical channelling. Refitted and restored. The greater part of the rim and the handle are restorations. H. 11.5 cm, dM. 10 cm, dB. 6–6.5 cm. Inv. no. 88.64.5 *(Pl. 30. 8)*.

6. Beaker. Plain, thin-walled, gently biconical miniature beaker with asymmetric body. Refitted and restored to a small extent. H. 7–7.5 cm, dM. 5.2 cm, dB. 2 cm. Inv. no. 88.64.6 *(Pl. 30. 9)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

7. Mug. Rim and body fragment of a thin-walled mug with incurving neck and squat, globular body, decorated with vertical channelling on the body. The surface is worn. 3.7 x 3.8 cm. Inv. no. 88.64.7 *(Pl. 30. 1)*.
8. Handle. Reddish-brown, doubly furrowed strap handle from a jug (?). 2.1 x 3.2 cm. Inv. no. 88.64.8 *(Pl. 30. 4)*.
9. Jug. Rim and body fragments of a jug with slightly incurving neck and squat, globular body. Slender, vertical ribs divide the belly into fields filled with oblique channelling. The stub of a vertically perforated subcutaneous handle formed towards the vessel interior and of a strap handle survive on the body. Refitted. Two fragments. dM. *ca*. 12–13 cm. Inv. no. 88.64.9 *(Pl. 30. 6)*.
10. Jug. Rim and body fragment of a light brownish jug with slightly incurving neck and squat, globular body. The belly is divided into fields filled with oblique channelling, separated by a nrrow, vertical rib. The surface is strongly worn. Refitted. dM. *ca*. 13 cm. Inv. no. 88.64.10 *(Pl. 30. 7)*.

**Grave 404** (Trenches 2/3–3/3; *Pl. 31*)

Calcined bones and a mussel[84] lay under the partly round and partly rectangular stone packing measuring 3 m by 2.5 m. A handful of animal bones were found by the eastern edge of the packing. One possible explanation for the unusual form of this stone packing is that its southern, smaller part was re-used for the packing of Grave 405, an adjacent burial.

The calcined bone fragments from the grave weighed 16.7 g. The age and sex of the deceased could not be determined.

**Grave 405** (Trenches 2/2–3/2; *Pl. 28*)

Only the northern edge of the stone packing of the grave lying in Trench 2/2 fell into Trench 3/2 excavated during the 1969 season. There were no finds under this section of the packing. The grave was uncovered in the 1972 season. A scatter of pottery sherds (1–5) was found under the stone packing lying at a depth of 94–114 cm, in part extending under the unexcavated baulk. The small number of sherds, most lying under the edge of the packing, suggests that the vessels had been deposited in a fragmented condition.

Grave goods

1. Bowl. Rim fragments of a plain, greyish, funnel-necked bowl. The surface was originally polished. Refitted. Two fragments. 4.7 x 5.2 cm, 6 x 4.8 cm. Inv. no. 88.65.1 *(Pl. 28. 6)*.
2. Pot. Rim and body fragment of a greyish, thin-walled, miniature pot with elongated S profile, decorated with a row of punctates around the shoulder and an incised zig-zag pattern on the belly. Refitted. 5.1 x 6.5 cm. Inv. no. 88.65.2 *(Pl. 28. 7)*.

[84] The broken left valve of an *Unio crassus* mussel.

3. Pot. Rim and body fragments of a large, brownish, thick-walled pot, decorated with a slender, finger-impressed cordon under the rim and two small round knobs on the body. The surface is coarsened. Refitted. Three fragments. Inv. no. 88.65.3 *(Pl. 28. 9)*.
4. Bowl (?). Body fragment of a brownish, thin-walled bowl, decorated with an incised herringbone pattern. 3 x 5.3 cm. Inv. no. 88.65.4 *(Pl. 28. 8)*.
5. Rhyton.[85] Belly fragment of a brownish rhyton, decorated with an incised herringbone pattern. 6.5 x 4.9 cm. Inv. no. 88.65.5 *(Pl. 28. 5)*.

**Grave 406** (Trench 3/3; *Pl. 32*)

A smaller, incomplete stone packing indicated the presence of a grave, whose greater part was destroyed when Pit "V", a settlement feature of the Celtic settlement was dug. There were no calcined bones under the stone packing. A small lobed jug (1), one-half of another jug with string-hole lugs (2) and a few bowl fragments (3) survived of the grave goods.

Grave goods

1. Mug. Small, reddish, thin-walled mug with incurving neck and lobed belly. The lobes are separated by vertical channelling. The first lobe left of the handle is covered with vertical channelling, the second and the third with oblique channelling in alternating directions to the right and left, the fourth and the seventh with vertical channelling, the fifth, the sixth, the eighth and the ninth with strongly worn oblique channelling in alternating directions to the right and left, the tenth with vertical channelling. The round-sectioned handle broke off. Refitted and restored. H. 6 cm, dM. 5.5 cm, dB. 2.5 cm. Inv. no. 88.66.1 *(Pl. 32. 3)*.
2. Jug. Body fragment of a greyish jug with squat, globular body, decorated with oblique channelling in alternating directions forming a triangle pattern combined with vertically perforated subcutaneous handles toward the vessel interior. A furrowed strap handle also survives. The surface is worn. Three fragments. Inv. no. 88.66.2 *(Pl. 32. 1)*.
3. Bowl. Semi-spherical bowl, decorated with dense vertical channelling on the rim and stabs on the rim exterior in some spots. The surface is strongly worn. Refitted and restored. The base is a restoration. H. 7.5–9.3 cm, dM. 21 cm, dB. 6.5 cm. Inv. no. 88.66.3 *(Pl. 32. 4)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

4. Bowl. Rim fragments of a plain, greyish, funned-necked bowl. Two fragments. 9.6 x 5.5 cm, 4.8 cm x 6 cm. Inv. no. 88.66.4 *(Pl. 32. 2)*.

**Grave 407** (Trench y/3)

A round stone packing measuring 2 m in diameter marked the grave near the north-eastern trench wall at a depth of 123 cm. A few calcined bone fragments, a mussel,[86] a broken mug (1) and a bowl fragment (2) came to light from under the stone packing. The vessels were probably already broken at the time of their deposition.

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[85] It is not another fragment of the rhyton described among the finds from Grave 359 (no. 7), which was accidentally assigned to Grave 405 when the finds were inventoried.

[86] The broken right valve of an *Unio crassus* mussel.

Grave goods

1. Mug. Rim and body fragment of a small, thin-walled mug with short, cylindrical neck and squat, globular body, decorated with channelling on the belly, now worn. The furrowed strap handle springs from the rim. The surface is strongly worn. 6.1 x 3.2 cm. Inv. no. 88.67.1 *(Pl. 31. 3)*.
2. Bowl. Body fragments of a plain, small bowl with a funnel-like inner profile. The surface is strongly worn. Five fragments. H. 4 cm, dM. 10 cm, dB. 4 cm. Inv. no. 88.67.2 *(Pl. 31. 4)*.

**Grave 408** (Trench y/3; *Pl. 31*)

The grave packing measuring 2 m by 2 m lay at a depth of 123 cm. The packing was rectangular rather than round in form. The calcined bones lay in a heap under the middle of the packing and a jug (1) tilted to one side was found beside them. A few pottery sherds (2–6) were found by the edge of the stone packing.

The calcined bone fragments from the grave weighed 64.6 g. The remains came from a 20–59-year-old adult/mature woman (?).

Grave goods

1. Mug. Plain, brownish mug with incurving neck and squat, globular body. The strap handle was on the missing part. The surface is strongly worn. Refitted. H. 9.5 cm, dM. 8–9 cm, dB. 4 cm. Inv. no. 88.68.6 *(Pl. 31. 10)*.
2. Mug. Rim and body fragment of a thin-walled mug with slightly incurving neck and squat, globular body, decorated with wide, oblique channelling on the belly. The originally polished surface is strongly worn. 3.5 x 2.8 cm. Inv. no. 88.68.1 *(Pl. 31. 5)*.
3. Bowl. Rim fragment of a small semi-spherical bowl, decorated with an incised line under the rim. The surface is strongly worn. 3.4 x 2.6 cm. Inv. no. 88.68.2 *(Pl. 31. 6)*.
4. Jug. Fragment of the furrowed handle of a large jug. 4.2 x 2.9 cm. Inv. no. 88.68.3 *(Pl. 31. 8)*.
5. Bowl. Rim fragment of a semi-spherical cup with flat rim, decorated with dense vertical channelling on the rim. The surface is strongly worn. 3.6 x 4.6 cm. Inv. no. 88.68.4 *(Pl. 31. 9)*.
6. Mug. Body fragment of a plain, reddish-brown mug with squat, globular body. The surface is strongly worn. 3.6 x 3 cm. Inv. no. 88.68.5 *(Pl. 31. 7)*.

**Grave 409** (Trenches y/2–y/3, 1/2; *Pl. 33*)

The stone packing of the grave lay at a depth of 110 cm, on the boundary between the two trenches. A small part of the grave extended under the wall of Trench 1/2. Lying under the stone packing were a bowl (1) with its mouth downward, which covered the calcined bones, a jug (2) whose original position could not be determined from its fragments and a second jug (3). A small bowl (4) with its mouth downward, covering the calcined bones, was found under the northern edge of the stone packing, while fragments of a pot (5) lay by its north-eastern end. Many fragments of the pot were missing. An animal bone lay near the pot; another animal bone was found on the stone packing. Several pottery sherds (6–12) lay scattered under the stone packing, among them the fragments of the lower half of a bowl.[87]

The calcined bone fragments found under vessel 1 weighed 262 g. The remains came from a 20–59-year-old adult/mature male. The calcined bone fragments lying under vessel 4 weighed 20.7 g. The remains came from a 0–2-year-old infant or child. The anthropological assessment of the human remains indicated that this grave can be regarded as a double burial.

[87] This artefact was discarded by István Torma.

Grave goods

1. Bowl. Large, semi-spherical bowl with flat rim, decorated with dense channelling on the rim in some spots. The surface is strongly worn. Refitted and restored. H. 12 cm, dM. 32 cm, dB. 8.5 cm. Inv. no. 88.69.1 *(Pl. 33. 1)*.
2. Jug. Brownish conical jug with slightly incurving neck and furrowed strap handle rising above the rim. The belly is decorated with oblique channelling in alternating directions arranged into fields separated by pairs of vertical channelling and three vertical subcutaneous handles thickening toward the vessel interior. The originally polished surface is strongly worn. Refitted. H. 15 cm, dM. *ca*. 12.4 cm. Inv. no. 88.69.2 *(Pl. 33. 5)*.
3. Jug. Rim and body fragments of a reddish-brown jug with slightly incurving neck and squat, globular body, decorated with fields filled with oblique channelling separated by pairs of vertical channelling. One fragment has a vertical subcutaneous handle thickened towards the vessel interior. The originally polished surface is strongly worn. Refitted. Two fragments. 3.6 x 3.7 cm, 8.7 x 5.5 cm. Inv. no. 88.69.3 *(Pl. 33. 10)*.
4. Bowl. Plain, thin-walled, conical miniature bowl with slightly outturned rim. The surface is strongly worn. H. 5–5.5 cm, dM. 10–11 cm, dB. 4–4.7 cm. Inv. no. 88.69.4 *(Pl. 33. 7)*.
5. Pot. Rim fragment of a brownish, thick-walled pot, decorated with two slender, finger-impressed cordons under the rim and a small round knob on the shoulder. The surface is worn. Two fragments. 6.1 x 7.1 cm, 6.4 x 6.6 cm. dM. *ca.* 24 cm. Inv. no. 88.69.5 *(Pl. 33. 6)*.
6. Pot (?). Body and base fragments of a greyish, thin-walled, conical pot, decorated with a horizontal herringbone pattern encircling the belly. The surface is strongly worn. Refitted. H. 5.5 cm. Inv. no. 88.69.6 *(Pl. 33. 3)*.
7. Pot. Body and base fragments of a brownish conical pot, decorated with incised oblique lines on the belly. The surface is worn. Two fragments. 7.1 x 4.3 cm, 4.3 x 4.9 cm. Inv. no. 88.69.7 *(Pl. 33. 2)*.
8. Bowl. Rim, body and base fragments of a plain, thin-walled, conical bowl with flat rim. The surface is strongly worn. Three fragments. dB. 5 cm. Inv. no. 88.69.8 *(Pl. 33. 12)*.
9. Amphora. Rim and body fragment of a large, brownish, globular amphora, decorated with fingertip impressions on the rim, a slender, finger-impressed cordon around the shoulder and a small round knob underneath. Refitted. 11.7 x 7.2 cm. Inv. no. 88.69.9 *(Pl. 33. 9)*.
10. Bowl. Rim and body fragment of a light brownish, probably plain, funnel-necked bowl. The surface is strongly worn. 5.7 x 5.4 cm. Inv. no. 88.69.10 *(Pl. 33. 11)*.
11. Pot. Rim fragment of a greyish-brown, thin-walled, biconical pot with slightly outturned rim, decorated with a slender cordon under the rim and a horizontal herringbone pattern underneath. There is a poorly impressed dot, perhaps marking the place of a round knob, under the cordon. 4.6 x 4.9 cm. Inv. no. 88.69.11 *(Pl. 33. 4)*.
12. Bowl. Rim fragment of brownish, grey mottled, funnel-necked bowl, decorated with vertical and oblique channelling on the rim interior. The originally polished surface is strongly worn. 4.7 x 4.5 cm. Inv. no. 88.69.12 *(Pl. 33. 8)*.

**Grave 410** (Trench y/2; *Pl. 31*)

The roughly triangular stone packing measuring 2.5 m by 1 m lay at a depth of 114 cm in the middle of the trench. There were no intact vessels or pottery sherds under the stone packing. The calcined bones lay in an area with a diameter of 20–25 cm under the middle of the stone packing.

The calcined bone fragments from the grave weighed 367.7 g. The remains came from a 25–45-year-old adult/mature male (?).

**Grave 411** (Trench y/2; *Pl. 32*)

The stones of the irregular stone packing covering an area of roughly 2 m by 2 m lay at a depth of 106 cm in the middle of the trench. Several vessel fragments were found by and under the northern and north-western edge of the stone packing. The calcined bones were strewn under the middle of the stone packing, some 10–15 cm under the stones. There were no intact vessels in the grave; however, a few pottery sherds (1–4) and, according to the field diary, three "spindle-shaped artefacts" (5–7)[88] lay among the few calcined bones.

The calcined bone fragments from the grave weighed 6.5 g. The age and sex of the deceased could not be determined.

Grave goods

1. Pot. Rim fragment of a brownish, thick-walled pot with outturned rim, decorated with a pair of nail-impressed cordons under the rim. The surface is worn. 5.4 x 5.1 cm. Inv. no. 88.70.1 *(Pl. 32. 7)*.
2. Pot. Rim fragment of a small, brownish, thin-walled pot, decorated with a double row of punctates under the rim and a horizontal herringbone pattern on the body. Two of the symmetrically placed small round knobs have survived on the fragment. 5.7 cm x 6 cm. Inv. no. 88.70.2 *(Pl. 32. 6)*.
3. Pot. Rim and body fragments of a light brownish, thin-walled pot, decorated with a row of punctates under the rim and horizontal herringbone patterns covering the body. A small, unperforated, furrowed string-hole lug is set under the rim. Refitted. Two fragments. 6.7 x 5.9 cm, 4.6 x 5.3 cm. dM. 15–16 cm. Inv. no. 88.70.3 *(Pl. 32. 9)*.
4. Pot. Body fragment of a brownish, thin-walled pot, decorated with an irregular herringbone pattern on the belly. 4.1 x 5.7 cm. Inv. no. 88.70.4 *(Pl. 32. 5)*.

5–8. Rollers. Brownish, cylindrical rollers with incurving sides. Two are intact, two are broken. Four pieces. L. of intact rollers 4.2 cm and 4.6 cm, L. of broken rollers 4.6 cm and 4.1 cm. Inv. no. 88.70.5 *(Pl. 32. 8)*

**Grave 412** (Trenches 1/1, y/1; *Pl. 31*)

The loosed stone packing measuring 2.5 m in diameter lay at a depth of 90 cm. The stone packing conforming to the direction of the slope extended into Trench y/1. The calcined bones lay under the trench wall, directly under the stones. A jug (1) originally set upright, but crushed by the weight of the stones, was found besides the human remains.

The calcined bone fragments from the grave weighed 14.6 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Mug. Brownish, thin-walled mug with slightly incurving neck and globular body, decorated with oblique channelling in alternating directions arranged in a triangle pattern and three vertical subcutaneous handles. The handle is a restoration, Refitted and restored. H. 10 cm, dM. 8.5 cm, diam. of belly 12 cm, dB. 4.2 cm. Inv. no. 88.71.1 *(Pl. 31. 2)*.

[88] In fact, there were four "spindle-shaped artefacts" in the grave.

**Grave 413** (Trenches 4/2–4/3; *Pl. 34*)

The stone packing with a diameter of 2 m lay at a depth of 123 cm on the boundary of the two trenches. A few very tiny calcined bone fragments lay under the middle of the stone packing. There were no vessels in the grave, save for a few indistinct sherds (2) and mussels[89] by the edge of the packing. An animal figurine (1) broken in two lay at the eastern edge of the stone packing.

Grave goods

1. Animal figurine.[90] Sand-coloured sheep figurine with longish cylindrical body. The eyes are denoted with incised lines, the nostrils with two impressed dots on the triangular head, The cheeks are broken, the mouth is indicated with an impressed line. The back was scored with a small broom-like implement when the clay was still wet. The tail wags to the right. Refitted from two fragments, the left hind leg is a reconstruction. L. 17 cm, H. 4.6 cm, Th. of body 3.4 cm. Inv. no. 88.72.1 *(Pl. 34. 1)*.[91]
2. Pot. Rim and body fragment of a small, greyish, thin-walled, conical pot with a tiny perforated handle under the rim. H. 6.9 cm. Inv. no. 88.72.2 *(Pl. 34. 2)*.

**Grave 414** (Trench 4/2; *Pl. 34*)

The calcined bones were deposited in an area measuring 20 cm in diameter under the middle of the large, round stone packing with a diameter of 3 m, found at a depth of 110 cm. A few smaller pottery sherds (4–6) lay beside the bones. Fragments of a pot (2) and a bowl (1) were heaped by the northern edge of the stone packing. Four fragments of an animal figurine (3) lying 15–15 cm apart came to light by the western edge of the stone packing. A part of the body and three legs are missing. Three mussel fragments were identified among the calcined bones during their examination.

The calcined bone fragments from the grave weighed 32.5 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Bowl. Rim and body fragment of a brownish, funnel-necked bowl, decorated with fields filled with vertical and oblique channelling on the rim interior. 8.1 x 8.2 cm. Inv. no. 88.73.1 *(Pl. 34. 6)*.
2. Pot. Rim, body and base fragments of a large, brownish, thick-walled pot, decorated with a slender, nail-impressed cordon under the slightly outturned rim and a small round knob underneath. The surface is coarsened. Three fragments, each refitted from smaller pieces. dB. 9.5 cm. Inv. no. 88.73.3 *(Pl. 34. 7)*.
3. Animal figurine.[92] Fragment of a sand-coloured, long-bodied sheep figurine with triangular head on which the left eye is marked by an incision and the right eye is indicated by an impression made by small rod with a diameter of 1 cm. Before the figurine was refitted and restored, it could be clearly seen that the rod had pierced the entire length of the body, emerging by the rump. The rod had either been burnt when the figurine was fired or it had been removed prior to firing. The animal figure had been modelled around the rod, which served as its core. The ears have broken off, the nostrils are indicated by impressed dots, the mouth is impressed, the jaw is prominent.

[89] Two fragments: one from an *Unio crassus*, the other from a *Cepaea vindobonensis* mussel.
[90] Torma 1972a, Taf. 56. 1; Torma 1972, 24, Kat. Nr. 274, Abb. 11. 1; Torma 1973a, 24, Kat. Nr. 274, Abb. 11. 1.
[91] Displayed at the permanent exhibition of the Hungarian National Museum.
[92] Torma 1972a, Taf. 56. 2; Torma 1972, 24, Kat. Nr. 275, Abb. 11. 2; Torma 1973a, 24, Kat. Nr. 275, Abb. 11. 2.

The toes on the right foreleg are depicted by incisions. The tail wags to the right. Refitted from several fragments and restored. The right foreleg is original, the rest are restorations. L. 22.5 cm, H. 8.7 cm, Th. of body 3 cm. Inv. no. 88.73.6 *(Pl. 34. 3)*.[93]

4. Bowl. Rim fragment of a brownish, semi-spherical bowl with flat rim, decorated with a horizontal groove under the rim and oblique channelling, now worn, in the interior. The surface is worn. 3.5 x 5 cm. Inv. no. 88.73.2 *(Pl. 34. 4)*.
5. Pedestal. Fragments of a light brownish, thin-walled, hollow, cylindrical pedestal. Three fragments, each refitted from smaller ones. Diam. 3.2 cm, 4.2 cm, 5.7 cm. Inv. no. 88.73.4 *(Pl. 34. 8)*.
6. Handle. Fragment of a reddish-brown, slightly peaked handle with round section springing from the vessel rim. The surface is worn. 2.4 x 3.3 cm. Inv. no. 88.73.5 *(Pl. 34. 5)*.

**Grave 415** (Trenches 4/1–4/2; *Pl. 35*)

Only about a quarter of the grave's stone packing fell into Trench 4/2, excavated in 1970. A handful of sherds (1–4) lay under the packing. Another quarter of the stone packing was uncovered in Trench 4/1, excavated in 1971. There were no finds under this part of the packing. The diameter of the entire stone packing was slightly less than 2 m. A small part of the grave remained under the baulk between Trenches 3/1 and 3/2.

Grave goods

1. Bowl. Rim and body fragments of a brownish, funnel-necked bowl with outturned rim, decorated with a pattern of dense vertical combing and fields alternately filled with vertical and oblique channelling on the rim interior. The surface is strongly worn. Seven fragments. Inv. no. 88.74.1 *(Pl. 35. 1)*.
2. Jug. Body fragment of a light brownish, thin-walled jug, decorated with oblique channelling in alternating directions arranged in what was perhaps a triangle pattern. 3.7 x 5.7 cm. Inv. no. 88.74.2 *(Pl. 35. 2)*.
3. Bowl (?). Body fragments of a plain, reddish, thick-walled bowl tempered with a micaceous tempering agent. 4 x 7.3 cm. Inv. no. 88.74.3 *(Pl. 35. 3)*.
4. Storage jar. Body and handle fragments of a plain, brownish, thick-walled storage jar with a strap handle. The surface is worn. Four fragments. Inv. no. 88.74.4 *(Pl. 35. 4)*.

**Grave 416** (Trenches 4/4–5/4; *Pl. 35*)

The large round stone packing lay on the boundary of Trenches 4/4 and 5/4. Calcined bones and a mussel[94] lay at a depth of 177 cm, immediately under the stones in the middle of the packing. Only a pottery sherd and the body and base fragments of a bowl (8) were found in this area. Various vessels had been placed under the edge of the stone packing, about 1 metre away from the ashes. The vessels were already broken at the time of their deposition: a funnel-necked bowl (1) under the western edge of the packing, a semi-spherical bowl with combed decoration (2) by the previous vessel, fragments of a jug (3) near vessel 2, rim and body fragments of a pot (4) and the fragments of a bowl (5) near the previous vessel by the northern end of the stone packing (where a rim fragment with channelled decoration was also found), small fragments of a bowl (6) and the fragment of a miniature bowl (7) among them by the eastern edge of the stone packing. Animal bones were identified during the washing of the finds.

[93] Displayed at the permanent exhibition of the Hungarian National Museum.
[94] A broken left valve of an *Unio crassus* mussel.

The calcined bone fragments from the grave weighed 9.6 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Bowl. Rim and body fragments of a large, plain, brownish, funnel-necked bowl, with a perforation on one fragment. The surface is strongly worn. Refitted. Seven fragments. Inv. no. 88.75.1 *(Pl. 35. 5)*.
2. Bowl. Fragment of a large semi-spherical bowl with flat rim, decorated with dense channelling on the rim and dense combing on the belly. The rim interior bears a channelled design of herringbone motifs alternating with oblique channelling. The base interior is divided into four fields, each filled with channelling in opposite directions. Refitted and slightly restored. Three fragments. H. 9.5 cm, dM. *ca.* 39 cm, dB. 10 cm. Inv. no. 88.75.2 *(Pl. 35. 12)*.
3. Jug. Rim and body fragments of a brownish, thin-walled jug with incurving neck and squat, globular body, decorated with oblique channelling in alternating directions arranged in a triangle pattern on the belly. There is a subcutaneous handle and the stub of another similar handle on the body. Refitted. H. of fragment 8.5 cm, dM. *ca*. 12 cm, diam. of belly *ca.* 15 cm. Inv. no. 88.75.4 *(Pl. 35. 7)*.
4. Pot. Rim fragments of a large, brownish, thick-walled pot, decorated with two rows of nail impressions under the rim. Three fragments. Inv. no. 88.75.3 *(Pl. 35. 8)*.
5. Bowl. The bowl fragment mentioned in the grave description can no longer be found.
6. Bowl. Rim and body fragments of a brownish semi-spherical bowl with flat rim, decorated with nail impressions on the slightly downward smoothed rim. The surface is strongly worn. Six fragments. Inv. no. 88.75.6 *(Pl. 35. 6)*.
7. Miniature vessel. Body fragment with a small part of the base of a conical miniature vessel, decorated with two rows of oblique stabs. H. of fragment 3.3 cm. Inv. no. 88.75.7 *(Pl. 35. 10)*.
8. Bowl. Body and base fragment of a large, greyish-brown bowl with slightly concave base. The base interior is divided into four fields: two opposite fields are filled with channelled herringbone motifs touching at the tip, the two other fields with horizontal channelling. Refitted. dB. 9.6 cm. Inv. no. 88.75.8 *(Pl. 35. 9)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

9. Ceramic fragment. Fragment of a clay pyramid-like (?) artefact with rectangular base, vertical or oblique walls and rounded corners, decorated with oblique incisions. 5.6 x 3.9 cm. Inv. no. 88.75.9 *(Pl. 35. 11)*.

**Grave 417** (Trenches 3/4–3/5; *Pl. 26*)

The large stone packing lay on the boundary of the two trenches. Only a few indistinct pottery sherds were found in the grave.[95] A bowl (1) lay under the north-eastern edge of the stone packing.

The calcined bone fragments from the grave weighed 1.2 g. The age and sex of the deceased could not be determined.

[95] These indistinct pottery sherds could no longer to be found when the finds were inventoried.

Grave goods

1. Bowl. Rim and body fragments of a plain, funnel-necked bowl. The surface is strongly worn. Refitted. 7.1 x 13.5 cm, 6.2 x 3 cm. dM. 29 cm. Inv. no. 88.76.1 *(Pl. 26. 9)*.

**Grave 418** (Trenches 1/4–2/4; *Pl. 36*)

The grave's large stone packing lay at a depth of 160 cm on the boundary of Trenches 1/4 and 2/4, with its edge extending into Trenches 1/5 and 2/5. A broken animal figurine (1) lay among the upper stones in the middle of the stone packing. It is possible that the hind leg (2) of this figurine came to lightly under the stones near the southern edge of the packing. The few calcined bones lay at a depth of 176 cm under the middle of the stone packing. A handful of sherds (3–7) from three or four pots and bowls were found by the edge of the stone packing on the southern and western side. A cattle mandible broken in half lay the stone packing's south-western edge.

The calcined bone fragments from the grave weighed 15.1 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1–2. Animal figurine.[96] Fragments of an animal figurine perhaps portraying a sheep. The shoulder and the upper portion of the forelegs survive with the stub of the thick, compact neck. The right foreleg broke off almost completely, the left one survived down to the knee. Judging from the hollow imprint on the body, the figurine was modelled around a rod core. The leg from the knee downward has survived of the left hind leg. The animal was portrayed as resting on its hind legs, in a half lying posture. The surface of the brownish figurine is pitted. It was poorly fired; the core is black. Two fragments. 5.8 x 5.8 cm, 2.4 x 7.2 cm. Inv. no. 88.77.6 *(Pl. 36. 6)*.

3. Pot. Rim fragment of a small, brownish pot with a slender handle rising above the rim, decorated with nail impressions under the rim. The surface is strongly worn. Refitted. 4.9 x 5.8 cm. Inv. no. 88.77.1 *(Pl. 36. 2)*.
4. Bowl. Rim fragment of a plain, light brownish, funnel-necked bowl. The surface is strongly worn. Refitted. 15.7 x 8.3 cm. dM. 37 cm. Inv. no. 88.77.2 *(Pl. 36. 5)*.
5. Pot. Rim fragments of a small, brownish pot, decorated with a row of fingertip impressions under the rim. Two fragments. 4.2 x 3.1 cm, 3.9 x 5.3 cm. Inv. no. 88.77.3 *(Pl. 36. 4)*.
6. Amphora. Shoulder fragment of a reddish amphora, decorated with two nail-impressed cordons around the shoulder. 4.8 x 5.3 cm. Inv. no. 88.77.4 *(Pl. 36. 3)*.
7. Pot. Rim fragments of a large, reddish-brown pot with a wide strap handle springing from the rim, decorated with a row of fingertip impressions under the rim. Two fragments, one refitted from smaller pieces. 4.8 x 3.9 cm, 10.2 x 5.4 cm. Inv. no. 88.77.5 *(Pl. 36. 1)*.

**Grave 419** (Trench 5/4; *Pl. 37*)

The small stone packing of the grave was found at a depth of 160 cm. About one-half had been destroyed when Pit 2/71, a Celtic feature, was dug. A mug (1) with its mouth downward was found at a depth of 180 cm under the one-time middle of the stone packing; placed beside the mug were a semi-spherical bowl (2) and a funnel-necked bowl (3), both deposited with the mouth downward and placed on one another. The bowls were damaged when the Celtic pit was dug. The base fragment of a pot (4) and the

[96] TORMA 1972, 24; TORMA 1973a, 24.

fragment of a mug with a string-hole lug (5) lay under the eastern edge of the stone packing. No calcined bones were found; they had probably been destroyed by the Celtic pit.

Grave goods

1. Cup. Short-necked cup with squat, globular body, decorated with vertical channelling, now worn, on the belly. The strap handle rising above the rim broke off. The surface is strongly worn. Cracked, the rim is chipped. H. 4.5 cm, dM. 7.7 cm, dB. 6 cm. Inv. no. 88.78.1 *(Pl. 37. 3)*.
2. Bowl. Semi-spherical bowl with slightly inward-thickening rim. The rim is decorated with dense vertical channelling. The base interior bears a design of channelled concentric circles. The exterior is slightly pitted. Refitted and largely restored. H. 7.5 cm, dM. 32.5 cm, dB. 10 cm. Inv. no. 88.78.2 *(Pl. 37. 5)*.
3. Bowl. Rim and body fragments of a large, reddish-brown, funnel-necked bowl. The rim is decorated with dense vertical channelling, the rim interior with oblique channelling in alternating directions arranged in a triangle pattern. The base interior is divided into four fields filled with oblique channelling in alternating directions. The surface is strongly worn. Refitted and restored. Three fragments. H. 11 cm, dM. 32.5 cm, dB. 10.5 cm. Inv. no. 88.78.3 *(Pl. 37. 4)*.
4. Pot. Base fragment of a plain, brownish, large, thick-walled pot, with traces of an incipient horizontal perforation near the base. Refitted. dB. 10.5–11.5 cm. Inv. no. 88.78.4 *(Pl. 37. 1)*.
5. Jug. Body fragments of a greyish, thin-walled jug, decorated with vertical and oblique channelling on the belly. There are two vertically perforated subcutaneous handles made towards the vessel interior on the body. The surface is worn. Two fragments. 7.3 x 4.2 cm, 4.9 x 4.3 cm. Inv. no. 88.78.5 *(Pl. 37. 2)*.

**Grave 420** (Trench y/5; *Pl. 36*)

The round stone packing of the grave lay at a depth of 160 cm in Trench y/5. The calcined bones and ashes were found under the middle of the stone packing, at a depth of 185 cm. The ashes and calcined bones were covered with a funnel-necked bowl (1), a cordon-decorated vessel (3) and a semi-spherical bowl (2). All three vessels were found in a fragmented condition, suggesting that they were already broken at the time of their deposition, confirmed also by the observation that a larger fragment of vessel 1 lay farther from the other pottery sherds. Animal bones were identified during the washing of the finds.

The calcined bone fragments from the grave weighed 106.3 g. The remains came from a 20–39-year-old adult female (?).

Grave goods

1. Bowl. Rim, body and base fragments of a plain, conical bowl with slightly incurving neck. The surface is strongly worn. Refitted. Thirteen fragments. dM. *ca.* 36 cm. Inv. no. 88.79.1 *(Pl. 36. 7)*.
2. Bowl. Rim, body and base fragments of a plain, brownish, thick-walled, semi-spherical bowl. The surface is worn. Refitted. Two fragments. H. 9 cm, dM. *ca*. 32 cm, dB. 10.1 cm. Inv. no. 88.79.2 *(Pl. 36. 9)*.[97]
3. Amphora. Rim and body fragment of a light brownish, thin-walled amphora, decorated with a pair of slender, nail-impressed cordons around the shoulder. Refitted. 15 x 18.3 cm. Inv. no. 88.79.3 *(Pl. 36. 8)*.

[97] Identified from the information contained in the conservation diary.

**Grave 421** (Trench 1/4; *Pl. 38*)

The loose stone packing of the grave lay at a depth of 165 cm in Trench 1/4. There were no calcined bone fragments in the grave. A few fragments of a pot (1) lay under the western edge of the packing, while the fragments of a bowl (2) under its northern edge.

Grave goods

1. Amphora. Body fragment of a light brownish, thin-walled amphora, decorated with a pair of slender, nail-impressed cordons around the shoulder. The surface is worn. 4.8 x 5.5 cm. Inv. no. 88.80.2 *(Pl. 38. 2)*.
2. Bowl. Rim fragment of a light brownish, thin-walled, funnel-necked bowl, decorated with dense vertical channelling on the rim and a row of punctates, now worn, around the shoulder. The surface is strongly worn. 3.6 x 5 cm. Inv. no. 88.80.1 *(Pl. 38. 1)*.

**Grave 422** (Trench y/4)

The large stone packing lay in the middle of the trench, at a depth of 160 cm. Vessels broken into tiny fragments almost beyond recognition lay under the middle of the stone packing: a bowl with combed decoration (1), deposited with the mouth downward, was found in the grave's southern end. A zig-zag decorated bowl (2), also with the mouth downward, and the body and base fragments of a bowl or pot (3) lay between the pottery sherds from vessels 1 and 2. The other finds were the fragments of a jug (4) and a few fragments of a semi-spherical bowl (5) as well as a broken pot (6) under the western edge of the packing. A few tiny animal bones lay among the fragments of vessel 6 and beside vessel 2. The calcined bones were covered with vessels 2 and 3.

The calcined bone fragments from the grave weighed 53 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Large, brownish, funnel-necked bowl, decorated with dense combing on the belly. The rim interior has a design of fields alternately filled with vertical and oblique channelling. The base interior was probably divided into four fields filled with channelling in alternating directions. Refitted and restored. H. 13.5 cm, dM. 42 cm, dB. 10–10.5 cm. Inv. no. 88.81.1 *(Pl. 38. 9)*.
2. Bowl. Large, brownish, thick-walled, funnel-necked bowl, decorated with channelled elongated Z motifs on the rim interior and an incised herringbone pattern on the belly, which probably covered the entire belly. The surface is coarsened. Refitted and restored (the base is missing). H. of fragment 11 cm, dM. 45 cm. Inv. no. 88.81.2 *(Pl. 38. 10)*.
3. Pot or bowl. Rim and body fragments of a thin-walled, globular vessel (a pot or bowl) with strongly outturned rim. A narrow, furrowed string-hole lug is set under the rim. The body is decorated with channelling probably arranged in a triangle pattern, now worn. The surface is worn. Three fragments. Inv. no. 88.81.3 *(Pl. 38. 3–5)*.
4. Jug. Jug with incurving neck and squat, globular body. The handle rises above the rim. Two pairs of vertical channelled lines divide the belly into fields filled with oblique channelling. Vertical subcutaneous handles formed towards the vessel interior are set on the body. Refitted and restored. The vessel fell apart after it was photographed. H. 14.2 cm. Inv. no. 88.81.4 *(Pl. 38. 6)*.

5. Bowl. Rim, body and base fragments of a reddish-brown, semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim. Refitted. Five fragments. dM. 28 cm, dB. 9 cm. Inv. no. 88.81.5 *(Pl. 38. 8)*.
6. Pot. Rim fragments of a brownish pot with elongated S profile, decorated with a pair of nail-impressed cordons under the rim. Refitted. Four fragments. Inv. no. 88.81.6 *(Pl. 38. 7)*.

**Grave 423** (Trench y/4; *Pl. 39*)

The fragments of two or three bowls (1–8) lay in a heap at a depth of 180 cm in Trench y/4.[98] Two small calcined bone fragments lay under the vessel sherds.

The calcined bone fragments from the grave weighed 9.3 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Small, greyish, funnel-necked bowl, decorated with a row of nail impressions around the shoulder and oblique channelling on the rim interior. The surface is strongly worn. Refitted and largely restored. H. 7.5–8.5 cm, dM. 22 cm, dB. 6 cm. Inv. no. 88.82.1 *(Pl. 39. 4)*.
2. Bowl. Rim and body fragments of a large, funnel-necked bowl. The surface is strongly worn without any indication of a former decoration. Refitted. Eleven fragments. dM. *ca.* 34 cm. Inv. no. 88.82.2 *(Pl. 39. 5)*.
3. Bowl. Rim fragment of a semi-spherical bowl with slightly funnel-shaped neck. The surface is strongly worn without any indication of a former decoration. Refitted. 8.3 x 10.1 cm. Inv. no. 88.82.3 *(Pl. 39. 8)*.
4. Bowl. Rim fragment of a funnel-necked bowl with slightly incurving neck and outturned rim, decorated with dense vertical channelling on the rim. The surface is strongly worn. 9.8 x 6.8 cm. Inv. no. 88.82.4 *(Pl. 39. 1)*.
5. Bowl. Rim and body fragment of a brownish, funnel-necked, miniature bowl, decorated with a row of punctates encircling the shoulder and a few vertical incised lines underneath. There is no trace of any other ornamentation. The surface is strongly worn. 5 x 4.6 cm. Inv. no. 88.82.5 *(Pl. 39. 2)*.
6. Pot. Rim fragment of a small, greyish-brown pot with a narrow furrowed strap handle springing from the rim. A small pointed knob and a double row of punctates extends to the left of the handle. The vessel body is covered with vertical incised lines. 3.8 x 4.2 cm. Inv. no. 88.82.6 *(Pl. 39. 7)*.
7. Pot. Rim fragment of a dark greyish pot, decorated with a pair of finger-impressed cordons under the rim. The surface is strongly worn. 3.1 x 4.2 cm. Inv. no. 88.82.7 *(Pl. 39. 6)*.
8. Pot. Rim fragment of a brownish pot with the stub of a handle rising slightly above the rim. Decorated with a slender, nail-impressed cordon. The surface is worn. 4.4 x 4.8 cm. Inv. no. 88.82.8 *(Pl. 39. 3)*.

**Grave 424** (Trench 1/4; *Pl. 39*)

The fragments of a cordon-decorated vessel (1) and of a bowl (2) lay at a depth of 182 cm in Trench 1/4. There was no stone packing above the grave and thus several pottery sherds (3–5) from other vessels were dislodged from their original position. No calcined bone fragments were found.

[98] After the conservation of the finds, it became clear that instead of the two-three bowls recorded in the field diary, the sherds from several more different types of vessels had been deposited.

Grave goods

1. Amphora. Rim and body fragments of a brownish amphora, decorated with a finger-impressed cordon around the shoulder. The surface is strongly worn. Refitted. Two fragments. dM. *ca*. 24 cm, H. of fragment 9.3 cm, 9.5 cm. Inv. no. 88.83.1 *(Pl. 39. 9)*.
2. Bowl. Rim and body fragment of a reddish-brown, funnel-necked bowl with a tiny section of the base, decorated with channelling, now worn, on the rim and the rim interior. The pattern can no longer be made out. The belly is decorated with a deeply incised herringbone pattern. The surface is strongly worn. Refitted. The stub of a small, vertically perforated handle can be seen on the fragment. dM. *ca*. 32 cm, H. of fragment 8.5 cm. Inv. no. 88.83.2 *(Pl. 39. 13)*.
3. Bowl. Rim fragment of a large, greyish-brown, funnel-necked bowl, decorated with barely visible, dense vertical channelling on the rim. A row of fingertip impressions runs under the rim. The surface is strongly worn. Refitted. 7 x 10.3 cm. Inv. no. 88.83.3 *(Pl. 39. 11)*.
4. Jug. Belly fragment of a light greyish, thin-walled jug, decorated with oblique channelling in alternating direction arranged in a triangle pattern and a vertical string-hole lug formed towards the vessel interior. Refitted. 5.8 x 4.1 cm. Inv. no. 88.83.4 *(Pl. 39. 10)*.
5. Bowl. Rim and body fragment of a plain, brownish, funnel-necked bowl. The surface is strongly worn. Refitted. Three fragments. Inv. no. 88.83.5 *(Pl. 39. 12)*.

**Grave 425** (Trenches y/5–y/6 and 1/5–1/6; *Pl. 9*)

The stone packing of the grave lay at a depth of 179–192 cm on the boundary of Trenches y/5– y/6 and 1/5–1/6. A few tiny calcined bone fragments lay under the middle of the stone packing. There were a handful of sherds scattered in the grave, which were discarded by the excavator.

The calcined bone fragments from the grave weighed 1.8 g. The age and sex of the deceased could not be determined.

**Grave 426** (Trench y/6; *Pl. 9*)

A lobed jug (1) with the mouth downward and a handled mug (2) tilted to one side lay under the middle of a ring of smaller stones measuring 90–95 cm in diameter at a depth of 215 cm near the western wall of Trench y/6. No calcined bone fragments were found in the grave during its excavation.[99]

The calcined bone fragments from the grave weighed 0.1 g. The age and sex of the deceased could not be determined.

Grave goods

1. Jug. Poorly preserved jug with slightly incurving neck and vertical lobes pressed outward from the vessel interior. The lobes are covered with oblique channelling in the same direction and a vertical groove separates the lobes. The remains of a subcutaneous handle made towards the vessel interior survive in two spots. Refitted. H. of fragment 4.3 cm, dM. 6.5 cm Inv. no. 88.84.1 *(Pl. 9. 18)*.
2. Mug. Mug with slightly incurving neck and squat, globular body. The furrowed strap handle rises slightly above the rim. The belly is decorated with vertical channelling. The surface is strongly worn and cracked. H. 4.4 cm, dM. 5 cm, dB. 3 cm Inv. no. 88.84.2 *(Pl. 9. 19)*.

[99] A few calcined bone fragments and a mussel were found when the finds were washed.

**Grave 427** (Trench ü/7; *Pl. 40*)

The stone packing of the grave lay at a depth of 210 cm in Trench ü/7. A few tiny calcined bone fragments were found at a depth of 225, which were covered by a funnel-necked bowl (1) deposited with the mouth downward, beside which lay the fragment of another bowl (3). A jug (2) was crushed by the weight of the stones. A clay stamp (4) lay between vessels 1 and 2.

Grave goods

1. Bowl. Large, brownish, funnel-necked bowl. The exterior is plain. The rim interior is covered with light oblique channelling. The surface is strongly worn. Refitted and largely restored. The vessel fell apart after it was photographed H. 12 cm, dM. 40.5–41 cm, dB. 11 cm. Inv. no. 88.85.1 *(Pl. 40. 1)*.
2. Jug with slightly incurving neck, squat, globular body and furrowed strap handle. Ten bundles of three slender, vertical ribs divide the belly into fields filled with oblique channelling in alternating directions. There are three subcutaneous handles on the belly formed toward the vessel interior. The two perforations for the attachment of the subcutaneous handle survive on the vessel body, but the reinforcement in the interior is lacking, suggesting that the two perforations were made first and that the handle was attached to the vessel from the interior after being set on the vessel body. Refitted and restored (the base is a reconstruction). H. 12 cm, dM. 10.6 cm, dB. 5–5.5 cm. Inv. no. 88.85.2 *(Pl. 40. 2)*.
3. Bowl. The bowl fragment can no longer be found.
4. Stamp.[100] Fan-shaped stamp with grooving along the lower third on both sides. The face is covered with a row of seven lozenges, each containing three impressed dots. H. 6.5 cm, L. 8.5 cm. Inv. no. 88.85.3 *(Pl. 40. 3)*.

**Grave 428** (Trench v/7; *Pl. 41*)

The stone packing of the grave was found at a depth of 220–240 cm. The edge of the stone packing extended under the 50 cm wide baulk. A handful of pottery sherds (1–5) were recovered from the grave, which did not contain any calcined bones.

Grave goods

1. Bowl. Body fragment of a large, greyish, funnel-necked bowl, decorated with carelessly incised lines without any apparent pattern. The rim interior is covered with wide vertical channelling. Two fragments. 5.7 x 3.4 cm, 9 x 4.8 cm. Inv. no. 88.86.1 *(Pl. 41. 3)*.
2. Bowl. Rim fragment of a plain, brownish, thick-walled, funnel-necked bowl. The surface is worn. 4.5 x 4.4 cm. Inv. no. 88.86.2 *(Pl. 41. 4)*.
3. Amphora (?). Body fragment of a brownish amphora (?) with a narrow, unperforated handle. The surface is strongly worn. 6 x 6.7 cm. Inv. no. 88.86.3 *(Pl. 41. 2)*.
4. Jug. Fragment of the vertical subcutaneous handle of a jug. 4.2 x 3.3 cm. Inv. no. 88.86.4 *(Pl. 41. 1)*.
5. Jug. Body fragment of a greyish jug, decorated with oblique channelling arranged into fields on the belly. The surface is strongly worn. 3.7 x 3.4 cm. Inv. no. 88.86.5 *(Pl. 41. 5)*.

[100] Torma 1975, Taf. 55. 2; Makkay 1984, 44. Fig. 28. 10; Chapman 2001, Fig. 3. 4; Bondár 2010a, Fig. 3. 2.

**Grave 429** (Trench z/7; *Pl. 41*)

The stone packing of larger stones lay in Trench z/7. The calcined bones, among which a chipped stone blade (3) was also found, lay under the stones at a depth of 250 cm. A bowl (1), already broken at the time of its deposition, and a conical mug (2) were placed beside the ashes. A few animal bones were found near the northern edge of the stone packing. A mussel[101] was found under the bowl.

The calcined bone fragments from the grave weighed 1.2 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Plain semi-spherical bowl, save for the dense vertical channelling on the rim. The originally polished surface is strongly worn. Refitted and restored. H. 8.4–10.6 cm, dM. 30.5 cm, dB. 7 cm. Inv. no. 88.87.1 *(Pl. 41. 8)*.
2. Scooping vessel. Plain, brownish, conical scooping vessel with a strap handle rising slightly above the rim. The surface is worn. Cracked. H. 4–5 cm, dM. 8.5 cm, dB. 5 cm. Inv. no. 88.87.2 *(Pl. 41. 6)*.
3. Greyish stone micro-blade. L. 2.7 cm, W. 1.2 cm, Th. 0.2 cm. Inv. no. 88.87.3 *(Pl. 41. 7)*.

**Grave 430** (Trench z/3; *Pl. 41*)

The small, roughly triangular stone packing of the grave lay at a depth of 130 cm. A few tiny calcined bone fragments were found under the middle of the stone packing at a depth of 150 cm.[102] A few small pottery sherds (1–2) were placed in the grave.

Grave goods

1. Jug. Rim fragment of a thin-walled jug with slightly incurving neck, decorated with oblique channelling, now worn, on the shoulder. The surface is strongly worn. 5.5 x 7.2 cm. Inv. no. 88.88.1 *(Pl. 41. 9)*.
2. Amphora. Body fragment of a reddish-brown, thick-walled amphora with short, stout handle. The surface is strongly worn. 6 x 4.1 cm. Inv. no. 88.88.2 *(Pl. 41. 10)*.

**Grave 431** (Trenches v/2–v/3; *Pl. 41*)

The small, roughly oblong stone packing measuring 1 m by 2 m lay at a depth of 103 cm in Trench v/3. A part of the packing extended into Trench v/2. Pottery sherds (1) from two or three vessels[103] lay under the stone packing. There were no calcined bone fragments in the grave.

Grave goods

1. Mug. Refittable rim fragments of a brownish, thin-walled mug with slightly incurving neck. The surface is strongly worn. Three fragments. Inv. no. 88.89.1 *(Pl. 41. 11)*.

[101] A broken left valve of an *Unio crassus* mussel.
[102] These remains could not be packed away during the excavation owing to their condition.
[103] As it later turned out, the three fragments all came from the same vessel.

**Grave 432** (Trench x/2; *Pl. 41*)

A stone packing measuring 0.5–0.6 m in diameter constructed of a few stones lay at a depth of 105 cm. A pot (1) with its mouth downward, broken into pieces, and a smaller bowl (2) lay under the stones. Another bowl (3) deposited with its mouth downward lay some 100 cm south of the grave. There was a third bowl (4) in the grave, which had been dislodged from its original position by the excavation workers.

Grave goods

1. Pot. This vessel can no longer be found.
2. Bowl. Brownish, conical miniature bowl with footed base. The plain surface is strongly worn. Refitted. H. 4.7 cm, dM. 12 cm, dB. 3.8–4 cm. Inv. no. 88.90.2 *(Pl. 41. 12)*.
3. Bowl. Rim and body fragments of a greyish-brown, funnel-necked bowl, decorated with channelling, now worn, on the rim interior. The surface is strongly worn. Two fragments, refitted from several smaller ones. 11.5 x 7.1 cm, 8.2 x 7.3 cm. Inv. no. 88.90.3 *(Pl. 41. 13)*.
4. Bowl. This vessel can no longer be found.

**Grave 433** (Trench 5/5; *Pl. 40*)

The roughly rectangular stone packing measuring 3 m by 2 m lay at a depth of 200–210 cm in Trench 5/5. There were no calcined bone fragments in the grave. A palm-sized fragment of a cordon-decorated vessel (1) lay under the middle of the stone packing. The other pottery sherds – a jug handle (2), a jug fragment (4), a mug fragment (3), bowl fragments (5–6) and pot fragments (7–8) – came to light from under the outermost stones on the packing's southern and south-western side.

Grave goods

1. Amphora. Rim and body fragments of a brownish, grey mottled amphora with elongated S profile, decorated with a pair of finger-impressed cordons around the shoulder. The surface is strongly worn. Refitted. 18.7 x 11 cm. Inv. no. 88.91.8 *(Pl. 40. 6)*.
2. Jug handle. Furrowed strap handle of a large, brownish jug. The surface is strongly worn. Refitted. 8.3 x 3.1 cm. Inv. no. 88.91.2 *(Pl. 40. 7)*.
3. Cup. Rim and body fragments of a plain, brownish cup with a part of the handle. The surface is strongly worn. Five fragments. Inv. no. 88.91.3 *(Pl. 40. 11)*.
4. Jug. Body fragments of a greyish-brown jug, decorated with grooving and a vertical subcutaneous handle. The surface is strongly worn. Two fragments. 3.6 x 7.3 cm, 4.3 x 4.3 cm. Inv. no. 88.91.4 *(Pl. 40. 8)*.
5. Bowl. Rim fragments of a plain, funnel-necked bowl. The surface is strongly worn. Two fragments, one refitted from smaller pieces. 8.3 x 10.5 cm, 14.5 x 13.3 cm. Inv. no. 88.91.5 *(Pl. 40. 4)*.
6. Bowl. Rim fragment of a brownish-red, semi-spherical bowl. The rim is covered with dense vertical channelling, now worn. An incised line runs under the rim on the exterior. The surface is strongly worn. 5.3 x 6.4 cm. Inv. no. 88.91.6 *(Pl. 40. 9)*.
7. Pot. Rim fragment of a brownish, thin-walled pot with elongated S profile, decorated with a row of punctates under the rim and a furrowed, unperforated, vertical string-hole lug spanning the rim and the neck. 5.8 x 18.1 cm. Inv. no. 88.91.7 *(Pl. 40. 10)*.

8. Amphora. Rim and body fragments of a large, brownish, thick-walled amphora, decorated with three slender cordons around the neck. The shoulder is divided into fields by bundles of ribs. The surface is strongly worn. Refitted. Six fragments. Inv. no. 88.91.1 *(Pl. 40. 5)*.

**Grave 434** (Trench 4/5; *Pl. 42*)

The roughly circular stone packing measuring 3 m in diameter lay at a depth of 165–175 cm. The calcined bones were deposited under the middle of the packing made up of mostly larger stones. The vessels lay to their west and north-west: an intact jug (1), placed with its mouth downward, a mug (2), deposited in a similar manner, pot fragments (4), among which lay a mug (3) tilted to one side, and a miniature vessel (5), also tilted to one side. A clay spindle whorl (6) was found beside the vessels. Fragments of two bowls (7–8) and a large cordon-decorated vessel (9) lay under the eastern edge of the stone packing, where two animal bones (later identified as horse bones) were also found.

The calcined bone fragments from the grave weighed 46.5 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Jug. Greyish-brown biconical jug with short, slightly incurving neck and furrowed handle. Three symmetrically placed subcutaneous handles divide the body into fields filled with vertical channelling to the right of the handle and oblique channelling which gradually turns vertical to the left of the handle. The surface was originally polished. The handle is refitted. H. 11.5–12 cm, dM. 10 cm, dB. 6 cm. Inv. no. 88.92.1 *(Pl. 42. 7)*.
2. Cup. Brownish, wide-mouthed cup with squat, globular body, decorated with pronounced vertical channelling, now worn, on the belly. The surface is strongly worn. H. 5 cm, dM. 8.3–8.5 cm, diam. of belly 9.5 cm, dB. 9 cm. Inv. no. 88.92.2 *(Pl. 42. 4)*.
3. Cup. Wide-mouthed cup with squat, globular body and furrowed strap handle, decorated with barely visible vertical channelling on the belly. The surface is strongly worn in patches. H. 3.7–4.3 cm, dM. 6.3–6.6 cm, diam. of belly 8 cm, dB. 8 cm. Inv. no. 88.92.3 *(Pl. 42. 5)*.
4. Pot. Small, plain pot with elongated S profile and two small horizontal, unperforated, furrowed string-hole lugs. The surface is worn. Refitted and restored. H. 10 cm, dM. 10–11 cm, dB. 5 cm. Inv. no. 88.92.4 *(Pl. 42. 8)*.
5. Miniature suspension vessel. Small, poorly preserved, brownish asymmetric vessel with two pairs of horizontally perforated small handles set opposite each other on the shoulder and on the belly. Cracked. H. 4.6–5 cm, dM. 5 cm, dB. 2.4–2.8 cm. Inv. no. 88.92.5 *(Pl. 42. 3)*.
6. Roller. Cylindrical roller with impressed ends and traces of use-wear in the middle. The surface is worn. H. 3.5 cm, diam. 2.3 cm. Inv. no. 88.92.6 *(Pl. 42. 1)*.
7. Bowl. Rim and body fragments of a plain, semi-spherical bowl with slightly funnel-like neck. The surface is strongly worn. Refitted. 16 x 9.3 cm. Inv. no. 88.92.8 *(Pl. 42. 10)*.
8. Bowl. Rim and body fragments of a funnel-necked, semi-spherical bowl. Traces of channelling can be made out on the rim interior. The belly is covered with combed decoration. The surface is strongly worn. Refitted. Three fragments. Inv. no. 88.92.9 *(Pl. 42. 9)*.
9. Amphora. Body fragment of a brownish amphora, decorated with a pair of nail-impressed cordons around the shoulder. The surface is worn. 7.2 x 7.6 cm. Inv. no. 88.92.10 *(Pl. 42. 2)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

10. Jug. Rim and body fragments of a plain, brownish jug with incurving neck and globular body. A small, horizontally perforated, furrowed string-hole lug is set under the rim. The surface is strongly worn. Refitted. H. of fragment 6 cm, dM. 8.5 cm. Inv. no. 88.92.7 *(Pl. 42. 6)*.

**Grave 435** (Trenches 1/5–1/6, 2/5–2/6; *Pl. 42*)

The north-eastern section of the extensive angular stone packing measuring 4.5 m by 3.5 m is not shown on the excavation plan owing to an omission in the field documentation. The middle of the packing, made up partly of large stones, lay at a depth of 165 cm, its edge at a depth of 170–180 cm. The calcined bones were found under a bowl (1) deposited with its mouth downward. Several vessels lay under the edge of the stone packing: fragments of a jug (2) and a bowl (3) by the western edge, fragments of another jug (4) and perhaps a bowl (5) by the southern edge, and fragments of another jug (6) and bowls (7–8) by the eastern edge.[104]

The calcined bone fragments from the grave weighed 161.7 g. The remains came from a 20–59-year-old adult-mature male.

Grave goods

1. Bowl. Rim, body and base fragments of a greyish, thin-walled, funnel-necked bowl, decorated with a row of punctates encircling the shoulder and a finely incised herringbone pattern underneath. The rim interior is covered with light channelling in alternating directions arranged in a triangle pattern. Fourteen fragments. Inv. no. 88.93.1 *(Pl. 42. 16)*.
2. Jug. Rim and body fragments as well as the furrowed strap handle of a greyish-brown jug with slightly incurving neck and squat, globular body, decorated with channelling in alternating directions arranged into what was perhaps a triangle pattern. Two fragments have a vertical subcutaneous handle on them. The surface is worn. Seven fragments. Inv. no. 88.93.4 *(Pl. 42. 14)*.
3. Bowl. Rim fragment of a small, semi-spherical bowl with flat rim. Plain, save for a groove under the rim. The surface is worn. 3.5 x 3.7 cm. Inv. no. 88.93.5 *(Pl. 42. 15)*.
4. Jug. Fragment of a jug with string-hole lugs. This vessel can no longer be found.
5. Bowl fragments. The pottery fragments can no longer be found.
6. Jug. Body fragments of a large, brownish, grey mottled jug and its furrowed, originally also channelled strap handle. Pairs of vertical channelling divide the body into fields filled with oblique channelling in alternating directions. The originally polished surface is strongly worn. Five fragments. Inv. no. 88.93.3 *(Pl. 42. 17)*.
7. Bowl. Rim and body fragments of a plain, funnel-necked bowl. The surface is strongly worn. Refitted. Four fragments. Inv. no. 88.93.2 *(Pl. 42. 11)*.
8. Pot. Rim fragment of a small, brownish, thin-walled pot, decorated with oblique nail impressions on the outward thickening rim and incised lines on the body. 2.6 x 4.9 cm. Inv. no. 88.93.6 *(Pl. 42. 12)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

9. Pot. Rim fragment of a dark greyish pot with elongated S profile, decorated with a row of vertical stabs and a row of punctates under the rim. 5.5 x 7.5 cm. Inv. no. 88.93.7 *(Pl. 42. 13)*.

[104] A broken left valve of an *Unio crassus* mussel and an animal bone were also recovered from the grave.

**Grave 436** (Trench 1/6; *Pl. 43*)

The stones of the round stone packing with a diameter of 2–2.5 m lay at a depth of 195–210 cm in the middle of Trench 1/6. The lower half of a vessel (1) tilted to one side, fragments of a bowl (2) deposited with the mouth downward and the fragments of a jug with a string-hole lug (3) lay under the middle of the stone packing.

Grave goods

1. Pot. Body and base fragments of a brownish, thick-walled pot. Refitted. Four fragments. dB. 13 cm. Inv. no. 88.94.1 *(Pl. 43. 1)*.
2. Bowl. Fragments of a reddish-brown, grey mottled, semi-spherical bowl with flat rim. The rim is covered with dense vertical channelling, now worn, the rim interior with vertical and oblique channelling, arranged in a herringbone pattern in some spots. The base interior is decorated with channelling arranged into concentric circles. The overall decorative design of the vessel cannot be reconstructed. Refitted and restored. Twenty-eight fragments. The vessel fell apart after it was photographed. dM. *ca.* 38 cm. Inv. no. 88.94.2 *(Pl. 43. 2)*.
3. Jug. Rim and body fragments of a jug with slightly incurving neck and squat, globular body, with the stub of the strap handle. The belly is covered with oblique channelling in alternating directions arranged in a triangle pattern. A vertical string-hole lug is set on the body. Refitted. Three fragments. Inv. no. 88.94.3 *(Pl. 43. 4)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

4. Bowl. Rim, body and base fragments of a plain, semi-spherical bowl with slightly funnel-shaped neck. The surface is strongly worn. Refitted. H. 13 cm, dM. *ca.* 34 cm, dB. 9.5 cm. Inv. no. 88.94.4 *(Pl. 43. 3)*. This vessel was found about half a metre north-east of the grave's stone packing and thus its association with the grave is dubious. It was probably intact when it was deposited.

**Grave 437** (Trenches 2/5–2/6; *Pl. 37*)

The large, irregular stone packing of the grave lay at a depth of 170–180 cm, on the boundary of Trenches 2/5 and 2/6. A few fragments of a vessel with cylindrical neck (1) lay in part above the western edge of the stone packing and in part under the stones.

Grave goods

1. Amphora (?). Rim, body and base fragments of a brick-coloured, thin-walled vessel with cylindrical neck and globular body. The stubs of a short handle survive on the neck and a small strap handle on another fragment. The surface is worn and bears scrap marks in some spots. Refitted. Four fragments. dM. 16 cm, dB. 11 cm. Inv. no. 88.95.1 *(Pl. 37. 6)*.

**Grave 438** (Trench 5/6; *Pl. 37*)

The stone packing of smaller stones measuring 1.7–2 m in diameter lay at a depth of 220 cm in Trench 5/6. The fragments of a thick-walled vessel, perhaps a pot (1), lay scattered under the middle of the stone packing. There were no calcined bone fragments in the grave.

Grave goods

1. Fragments of a thick-walled vessel, perhaps a pot.[105]

**Grave 439** (Trenches 4/6–5/6; *Pl. 44*)

The more or less round stone packing with a diameter of 1.5–2 m lay at a depth of 213 cm on the boundary between Trenches 4/6 and 5/6. Wedged in-between two larger stones in the middle of the packing were a semi-spherical bowl (1) and the fragments of a jug (2). A funnel-necked bowl (3), placed with its mouth downward, a jug (4) and another semi-spherical bowl (5) lay under the middle of the stone packing. Four rollers (6–9) were also deposited in the grave. Antler fragments were identified during the washing of the finds.

Grave goods

1. Bowl. Brownish-grey, semi-spherical bowl with flat rim. The rim is covered with dense vertical channelling, the rim interior with bundles of channelled lines and channelled herringbone motifs. The base interior is decorated with a channelled design of what were perhaps concentric circles. The surface is strongly worn. The vessel's exact decoration cannot be reconstructed owing to the vessel's missing parts. Refitted and restored. H. 9 cm, dM. 26 cm, dB. 8 cm. Inv. no. 88.96.1 *(Pl. 44. 4)*.
2. Mug. Mug with slightly incurving neck, squat, globular body and furrowed strap handle. Three vertical subcutaneous handles formed towards the vessel interior are set on the body. (The subcutaneous handle opposite the strap handle appears to be unperforated owing to the restoration.) Pairs of ribs divide the belly into fields, the latter filled with oblique channelling in alternating directions. The surface is strongly worn. Refitted and restored. H. 11 cm, dM. 8.5–9 cm, dB. 4.5 cm. Inv. no. 88.96.2 *(Pl. 44. 1)*.
3. Bowl. Brownish, funnel-necked bowl, decorated with six pairs of tiny knobs on the shoulder and channelling, now worn, in the interior. Traces of channelling survive on the rim. The surface is strongly worn. Refitted and restored. The base is a reconstruction. H. 10.5 cm, dM. 34.2 cm, dB. 10 cm. Inv. no. 88.96.3 *(Pl. 44. 6)*.
4. Jug. Rim, body and handle fragments of a greyish-brown, thin-walled jug, decorated with oblique channelling in alternating directions arranged in a triangle pattern. Two fragments have vertical subcutaneous handles formed towards the vessel interior. The surface is worn. Refitted. Five fragments. Inv. no. 88.96.4 *(Pl. 44. 3)*.
5. Bowl. Brownish semi-spherical vessel with flat rim. An incised line runs under the rim, which is covered with dense vertical channelling. The vessel interior is covered with bundles of vertical and oblique channelling, the base interior with channelling arranged into what were perhaps concentric circles. The surface is strongly worn. Refitted and extensively restored. H. 8–9 cm, dM. 24 cm, dB. 6.5 cm. Inv. no. 88.96.5 *(Pl. 44. 5)*.

6–9. Rollers. Reddish, chunky rollers. Four pieces. Inv. no. 88.96.6 *(Pl. 44. 2)*.

**Grave 440** (Trench 4/6; *Pl. 26*)

The round stone packing of larger and smaller stones with a diameter of 2 m was found at a depth of 212–225 cm in Trench 4/6. The non-joining fragments of a jug (1) lay under the stones, at a depth of 140 cm. The grave did not contain any calcined bones.

[105] This fragment was discarded during the ecavation.

Grave goods

1. Jug. Rim and body fragments of a thin-walled jug with slightly incurving rim. Slender vertical ribs divide the belly into fields filled with oblique channelling. The surface is strongly worn. Three fragments. Inv. no. 88.97.1 *(Pl. 26. 10)*.

**Grave 441** (Trenches 5/2–5/3; *Pl. 44*)

The stone packing of larger stones measuring roughly 150 cm in diameter lay in Trenches 5/2–5/3. The grave goods were visible under the middle of the loose stone packing: an intact jug (1) with the mouth downward, fragments of a funnel-necked bowl (2) and a cup (3) placed upright, crushed by one of the stones.

The calcined bone fragments from the grave weighed 1.5 g. The age and sex of the deceased could not be determined.

Grave goods

1. Mug. Thin-walled, biconical mug with slightly incurving neck, decorated with delicate channelling in alternating directions arranged in a triangle pattern and three vertical subcutaneous handles formed toward the vessel interior. The channelled strap handle rises slightly above the rim. The originally polished surface is strongly worn. H. 10 cm, dM. 8.4 cm, dB. 4 cm. Inv. no. 88.98.1 *(Pl. 44. 7)*.
2. Bowl. Fragments of a greyish, thin-walled, funnel-necked bowl. The surface is strongly worn. Refitted and restored. H. 6.8–7 cm, dM. 15.7 cm, dB. 5.7 cm. Inv. no. 88.98.2 *(Pl. 44. 9)*.[106]
3. Cup. Reddish-brown cup with short, incurving neck and squat, globular body, decorated with wide channelling in alternating directions arranged in a triangle pattern. Traces of an unfinished vertical perforation can be seen in one spot. The originally polished surface is strongly worn. Refitted and restored. H. 5.5–6 cm, dM. 8 cm, diam. of belly 9.5 cm. Inv. no. 88.98.3 *(Pl. 44. 8)*.

**Grave 442** (Trench 5/3; *Pl. 43*)

The large stone packing measuring 2.5 m in diameter was made up of several layers. It lay at a depth of 138–160 cm in Trench 5/3. The few calcined bones were deposited under the middle of the stone packing. The fragment of a semi-spherical bowl (1) with the mouth downward lay beside the calcined bones. The position of the fragments suggested that the bowl was already broken at the time of its deposition. A funnel-necked bowl (2) and a thick-walled pot (?) (3) were likewise broken at the time they were placed in the grave. A beaker (4) tilted to one side was found beside the base of vessel 2. An animal tooth and a small lump of ochre were found beside the calcined bones. A few pottery sherds (5–7) lay under the edge of the stone packing. A zig-zag decorated clay cone (8) was found under the southern edge of the stone packing.

The calcined bone fragments from the grave weighed 1.9 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Brownish semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim. The surface is strongly worn. Refitted and restored. H. 9.5 cm, dM. 30.2 cm, dB. 7.7 cm. Inv. no. 88.99.1 *(Pl. 43. 6)*.

[106] The vessel was identified on the basis of the conservation diary.

2. Fragment of a funnel-necked bowl.[107]
3. Pot. Rim, body and base fragments of a brownish-red, coarse pot with elongated S profile, decorated with a row of nail impressions on the rim and a flattened knob-like protuberance on the rim in one spot. Refitted. Seven fragments. Inv. no. 88.99.3 *(Pl. 43. 7)*.
4. Miniature beaker. Brownish, thick-walled, coarsely-made, conical beaker with slightly constricted upper part and asymmetrical body. H. 4.8 cm, dM. 4 cm, dB. 2.5 cm. Inv. no. 88.99.4 *(Pl. 43. 11)*.
5. Bowl. Rim, body and base fragments of a large, brownish, funnel-necked bowl, decorated with barely visible channelling (?) on the rim. The surface is strongly worn. Refitted. Five fragments.H. 6.6 cm, dM. *ca.* 33 cm, dB. 9 cm. Inv. no. 88.99.5 *(Pl. 43. 10)*.
6. Pot. Rim fragment of a reddish-brown, thick-walled pot with elongated S profile. 5 x 6.1 cm. Inv. no. 88.99.6 *(Pl. 43. 9)*.
7. Jug. Rim and body fragment of a greyish jug with slightly incurving neck, with the stub of a handle. Two fragments. 3.8 x 4.3 cm, 4.1 x 5.1 cm. Inv. no. 88.99.7 *(Pl. 43. 8)*.
8. Clay cone.[108] Reddish cone with rectangular base and indented top. The base is plain, the sides are decorated with an incised herringbone pattern. H. 5.2 cm, dB. 3.3 x 2.4 cm. Inv. no. 88.99.2 *(Pl. 43. 5)*.

**Grave 443** (Trench 4/1)

About one-half of the stone packing lying by the trench's south-eastern side could be excavated owing to the proximity of the road. The stone packing lay at a depth of 70 cm, above the natural block stream at 98–105 cm. Lying under the stone packing were the fragments of a funnel-necked bowl (1) with the mouth downward, a small mug (2), a semi-spherical bowl (3) and a pot (?) (4). The calcined bones were found under the vessels, covering an area with a diameter of 30–40 cm. Two fragments of cone-shaped clay objects (5–6) were also deposited in the grave,

The calcined bone fragments from the grave weighed 75.4 g. The remains came from a 20–59-year-old adult/mature individual, whose sex could not be determined.

Grave goods

1. Bowl. Brownish-grey, funnel-necked bowl, decorated with dense vertical channelling on the rim interior and three pairs of tiny knobs on the shoulder. The surface is strongly worn. Refitted and restored. H. 7–7.5 cm, dM. 22.5 cm, dB. 6.5 cm. Inv. no. 88.100.1 *(Pl. 45. 4)*.
2. Mug. Dark greyish miniature mug with short, cylindrical neck and squat, globular body, decorated with vertical channelling on the body, Only the stub of the handle with circular section survived. The surface is strongly worn. The rim is chipped, the handle broke off. H. 4.8 cm, dM. 4.5 cm. Inv. no. 88.100.2 *(Pl. 45. 1)*.
3. Bowl. Rim fragments of a brownish, semi-spherical bowl. Plain, save for the dense vertical channelling on the rim. Refitted. 19 x 10.4 cm, dM. *ca.* 32–34 cm. Inv. no. 88.100.3 *(Pl. 45. 5)*.
4. Bowl. Rim fragments of a brownish, funnel-necked bowl, decorated with dense vertical channelling on the rim and probably four pairs of tiny knobs on the shoulder. H. 6.7 cm, dM. 24 cm, dB. 6.5 cm. Inv. no. 88.100.4 *(Pl. 45. 6)*.

5–6. Clay cones. Fragments of the slightly indented upper part of clay cones, decorated with an incised zig-zag pattern on the sides. Two fragments. 3.3 x 3.3 cm, 1.8 x 1.6 cm. Inv. no. 88.100.5 *(Pl. 45. 2–3)*.

[107] This bowl fragment was discarded during the ecavation.
[108] Torma 1975, Taf. 55. 1; Bondár 2010a, Fig. 2. 2.

**Grave 444** (Trench 4/1)

The grave in Trench 4/1 was indicated by a loose stone packing with a diameter of roughly 2.5 m lying at a depth of 90–122 cm, sloping in the direction of the mountain slope. There were no stones in the middle of the stone ring, where the grave goods were placed: a semi-spherical bowl (1) with the mouth downward, fragments of a funnel-necked bowl (2), also with the mouth downward, and fragments of a crushed jug (3), which in part lay on vessel 1. A mug (4) lay above vessel 1. The fragments of a cordon-decorated vessel (5) and of a jug (6) were found under the edge of the stone packing.

Grave goods

1. Greyish-brown, semi-spherical bowl, decorated with dense, vertical channelling on the rim. The exterior is plain, the interior is covered with a design created from the alteration of fields filled with vertical and oblique channelling. The base interior is decorated with a channelled spiral. The entire decoration cannot be reconstructed owing to the vessel's fragmented condition. The originally polished surface is strongly worn. Refitted and restored. H. 9.5 cm, dM. 30 cm, dB. 8 cm. Inv. no. 88.101.1 *(Pl. 46. 1)*.[109]
2. Bowl. Brownish, funnel-necked bowl, decorated with dense, vertical channelling on the rim and a pair of small knobs on the shoulder. The originally polished surface is strongly worn. Refitted and restored. H. 6.2 cm, dM. 19 cm, dB. 5.5 cm. Inv. no. 88.101.2 *(Pl. 46. 3)*.
3. Jug. Brownish biconical jug with slightly incurving neck and furrowed strap handle. Eleven pairs of vertical channelling divide the belly into fields filled with channelling in alternating directions. There are three vertically perforated subcutaneous handles formed toward the vessel interior. The originally polished surface is strongly worn. Refitted and restored. H. 11 cm, dM. 8.5 cm, dB. 4.5 cm. Inv. no. 88.101.3 *(Pl. 46. 7)*.
4. Mug. Biconical miniature mug with furrowed strap handle Pairs of vertical channelling divide the belly into fields filled with oblique channelling. The neck is restored H. 4.7 cm, dM. 5 cm, dB. 1.8 cm. Inv. no. 88.101.4 *(Pl. 46. 2)*.
5. Amphora. Rim and body fragments of a greyish amphora, decorated with a pair of slender, finger-impressed cordons around the shoulder. Refitted. Two fragments. 21.5 x 16.7 cm, 5.8 x 4.6 cm, dM. 18 cm. Inv. no. 88.101.5 *(Pl. 46. 4)*.
6. Mug. Brownish biconical mug with slightly incurving neck. Vertical pairs of ribs divide the belly into fields filled with oblique channelling in alternating directions. The surface is worn. Refitted and extensively restored. H. 9.5 cm, dM. 8 cm, dB. 4 cm. Inv. no. 88.101.6 *(Pl. 46. 6)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

7. Chip and blade fragment. L. 1.4 cm, W. 1.6 cm, W. 0.2 cm, L. 1.1 cm, W. 0.8 cm, W. 0.3 cm. Inv. no. 88.101.7 *(Pl. 46. 5)*.

**Grave 445** (Trench 3/6; *Pl. 47*)

The large stone packing of the grave, measuring 3–3.5 m in diameter, lay at a depth of 205–235 cm in Trench 3/6. The middle of the stone packing was disturbed in the Celtic period: the stones were removed from a roughly 160 cm by 80–90 cm large area. A large Celtic urn with the mouth downward lay at a

[109] Identified from the information contained in the conservation diary.

depth of 235–240 cm, in line with the base of the stone packing. The Celtic intrusion, which was not indicated by a soil mark, destroyed the middle of the Copper Age grave. A semi-spherical bowl (1) and a rectangular vessel (2) survived relatively intact in the middle of the grave. Additional pottery sherds were found under the edge of the stone packing, which came from bowls (3, 10) a jug (9) and cordon-decorated vessels (4–8).

Grave goods

1. Bowl. One-half of a greyish, semi-spherical bowl, decorated with dense vertical channelling on the rim. The exterior is plain, the base interior bears concentric channelling. The surface is strongly worn. Refitted and some parts restored. Six fragments. H. 11.5 cm, dM. 34 cm, dB. 9 cm. Inv. no. 88.102.1 *(Pl. 47. 1)*.
2. Rectangular vessel, a wagon model.[110] Reddish-brown, plain trapezoidal vessel with peaked corners and a mat impression on the base. The surface is worn. Refitted. H. 4.9 cm, diam. 7.5 x 7.5 cm, dB. 8.5 cm. Inv. no. 88.102.2 *(Pl. 47. 9, Pl. 56, Fig. 16)*.
3. Bowl. Rim and body fragment of a brownish, funnel-necked bowl, decorated with dense vertical channelling on the rim and light channelling in alternating directions arranged in a triangle pattern underneath. The surface is strongly worn. Refitted. dM. *ca*. 30 cm. Inv. no. 88.102.3 *(Pl. 47. 10)*.
4. Amphora. Body fragment of a large, brownish-red amphora with globular belly, decorated with a slender, finger-impressed cordon around the shoulder. Refitted. 22.5 x 18.2 cm. Inv. no. 88.102.4 *(Pl. 47. 8)*.
5. Pot. Rim fragments of a brownish-grey pot with elongated S profile, decorated with lightly impressed punctates under the rim and a small unperforated string-hole lug. Refitted. L. 4.3 cm. Inv. no. 88.102.5 *(Pl. 47. 4)*.
6. Amphora. Rim and body fragments of a greyish, thick-walled amphora, decorated with a double row of nail impressions around the shoulder. Three fragments bear an unperforated horizontal string-hole lug. Four fragments. Inv. no. 88.102.6 *(Pl. 47. 3)*.
7. Amphora. Body fragment of a greyish-red, thick-walled amphora with a short strap handle. 8 x 7.6 cm. Inv. no. 88.102.7 *(Pl. 47. 5)*.
8. Amphora. Body fragment of a reddish-brown amphora with a short strap handle. 6.5 x 4.6 cm. Inv. no. 88.102.8 *(Pl. 47. 6)*.
9. Jug. Belly fragments of a brownish, thin-walled jug. Pairs of wide channelling divide the belly into fields filled with oblique channelling. The surface is strongly worn. Two fragments. 5 x 4.2 cm, 4.6 x 4.2 cm. Inv. no. 88.102.9 *(Pl. 47. 7)*.
10. Bowl. Rim and body fragments of a plain, brownish bowl with constricted neck. The surface is strongly worn. Refitted. Two fragments. 8.2 x 5.2 cm, 7.5 x 4.5 cm. Inv. no. 88.102.10 *(Pl. 47. 2)*.

**Grave 446** (Trenches 4/6–5/6)

The stone packing of the grave measuring 2–2.5 m in diameter lay at a depth of 205–218 cm on the boundary of Trenches 4/6 and 5/6. A handful of fragments of a funnel-necked bowl (1) lay scattered under the middle of the stone packing. A single calcined bone was found in the grave.

The calcined bone fragment from the grave weighed 0.9 g. The age and sex of the deceased could not be determined.

[110] Torma 1975, Taf. 55. 3; Bondár 1990, Abb. 7. 3; Bondár 1992, 115, Fig. 7. 3; Bondár 2004, Fig. 2. 3; Bondár 2006, 229, Fig. 5. 3; Bondár 2012, Fig. 8. 3; Bondár 2012a, Fig. 8. 3.

Grave goods

1. Bowl. Rim fragments of a funnel-necked bowl, without any traces of decoration. The surface is strongly worn. Refitted. 8.6 x 9.2 cm. Inv. no. 88.103.1.[111] *(Pl. 47. 11)*.

**Grave 447** (Trench 6/3; *Pl. 46*)

The large stone packing originally measuring 3 m in diameter lay in the middle of Trench 6/3. The stone packing had several layers. The stones in the middle lay highest, at a depth of 145 cm, while the stones at the edges at a depth of 157–164 cm. The eastern half of the stone packing was destroyed by a Celtic house (House 1/72). There were no calcined bones or any other finds under the packing. A few sherds of a bowl (1) lay under the northern end of the packing and a pot (2) deposited with its mouth downward by the south-western end. A small suspension vessel (3) tilted to one side was found 40 cm from the former vessel. A handful of small sherds (4–7) lay under the edge of the stone packing.[112]

Grave goods

1. Bowl. Rim and body fragments of a large, brownish, funnel-necked bowl, decorated with dense vertical channelling on the rim and pronounced channelling on the neck interior. A row of punctates encircles the shoulder, combined with an incised irregular herringbone pattern underneath. Refitted. 13 x 10 cm. Inv. no. 88.104.2 *(Pl. 46. 14)*.
2. Pot. Small pot with elongated S profile, decorated with a slender cordon densely covered with nail impressions under the rim; the cordon has two gaps on opposite sides. Two small horizontal string-hole lugs are set opposite each other. Refitted and restored. H. 8 cm, dM. 11 cm, dB. 4.5 cm. Inv. no. 88.104.1 *(Pl. 46. 8)*.
3. Miniature suspension vessel. Greyish-brown vessel with constricted neck and slightly squat, globular body, decorated with a wide herringbone pattern on the belly and two upward pointing, perforated knobs on the shoulder. The base is flaked. H. 5.2 cm, dM. 3.3 cm, diam. of belly 6.5 cm, dB. 2.6 cm. Inv. no. 88.104.7 *(Pl. 46. 13)*.
4. Jug. Rim and body fragments of a greyish, thin-walled jug with furrowed strap handle. The belly is lobed; the channelled lobes were pressed out from the vessel interior. The surface is strongly worn. Refitted. Two fragments. 3.5 x 5.2 cm, 3.5 x 4 cm. Inv. no. 88.104.3 *(Pl. 46. 12)*.
5. Bowl. Rim fragment of a small, funnel-necked bowl, decorated with a row of punctates around the shoulder. The surface is strongly worn. 3.5 x 2.8 cm. Inv. no. 88.104.4 *(Pl. 46. 10)*.
6. Bowl. Rim fragment of a plain, light brownish, thin-walled, funnel-necked bowl. The surface is strongly worn. Refitted. 4.9 x 4.2 cm. Inv. no. 88.104.5 *(Pl. 46. 9)*.
7. Bowl. Rim fragment of a small, light brownish, thin-walled, semi-spherical bowl, decorated with oblique channelling on the interior. Refitted. 3.6 x 2 cm. Inv. no. 88.104.6 *(Pl. 46. 11)*.

**Grave 448**[113] (Trench 6/2; *Pl. 48*)

The grave lacking a stone packing lay at a depth of 155 cm in the middle of the trench. The grave goods were a jug (1) tilted to one side and two bowls (2–3), both deposited with the mouth downward. The rim fragment of a bowl (4) perhaps comes from another vessel.

[111] Only a single fragment of the 5–6 fragments mentioned in the field diary was inventoried.

[112] The fragment of a deer antler lay at a depth of 140 cm, some 20–30 cm from the western edge of the stone packing; its association with the grave is dubious.

[113] Torma 1976, Taf. 61. 2.

Grave goods

1. Mug. Globular mug with a slightly incurving neck and furrowed strap handle, decorated with a channelled line on either side of the handle and seven pairs of vertical channelled lines, dividing the belly into fields filled with channelling in alternating directions. There are three subcutaneous handles formed toward the vessel interior on the belly. Refitted and restored. H. 8.6 cm, dM. 6.5 cm, dB. 3.2 cm. Inv. no. 88.105.1 *(Pl. 48. 2)*.
2. Bowl. Greyish, thin-walled, funnel-necked bowl. The exterior is plain, the rim interior is covered with vertical channelling. The base interior was probably decorated with a design of four fields filled with channelling in alternating directions. The surface was originally polished. Refitted and restored. H. 7.7 cm, dM. 18.5 cm, dB. 6 cm. Inv. no. 88.105.2 *(Pl. 48. 7)*.
3. Bowl. Semi-spherical bowl with flat rim, decorated with an incised line under the rim and dense vertical channelling on the rim, of which faint traces survive. The interior is decorated with channelling in alternating directions arranged into what was perhaps a triangle pattern. The surface is strongly worn. Extensively restored. Two fragments. H. 8 cm, dM. 23.5 cm, dB. 6 cm. Inv. no. 88.105.3 *(Pl. 48. 3)*.
4. Bowl. Rim and body fragment of a small, plain, conical bowl with vertical neck. 3.6 x 4.2 cm. Inv. no. 88.105.5 *(Pl. 48. 5)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

5. Bowl.[114] Rim fragment of a small, brownish, thin-walled bowl. The surface is strongly worn. Refitted from smaller fragments. dM. *ca*. 15 cm. Inv. no. 88.105.4 *(Pl. 48. 1)*.
6. Pot. Rim fragment of a small, brownish pot, decorated with a pair of nail-impressed cordons. 3.9 x 1.8 cm. Inv. no. 88.105.6 *(Pl. 48. 4)*.
7. Jug. Neck fragment of a reddish-brown, plain jug with incurving neck. 3 x 2.9 cm. Inv. no. 88.105.7 *(Pl. 48. 6)*.

**Grave 449** (Trenches 2/1–3/1; *Pl. 45*)

The stone packing of larger stones lay at a depth of 48–60 cm on the boundary of Trenches 2/1 and 3/1. The fragments of a funnel-necked, conical bowl (1) lay scattered under the stones.

Grave goods

1. Bowl. Fragments of a brownish, funnel-necked, conical bowl with traces of the dense vertical channelling covering the rim. The neck interior is covered with pronounced vertical channelling. The surface is strongly worn. Refitted and restored. Two fragments. H. 15.5 cm, dM. *ca*. 38 cm, dB. 11.3 cm. Inv. no. 88.106.1 *(Pl. 45. 9)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

2. Bowl. Rim and body fragments of a large, reddish, semi-spherical bowl, decorated with channelling in alternating directions on the rim interior. Three fragments, each refitted from smaller pieces. Inv. no. 88.106.2 *(Pl. 45. 8)*.

[114] This fragment was not refitted to the other pieces when the bowl described under No. 3 was restored.

3. Bowl. Rim and body fragments of a brownish, funnel-necked bowl. The exterior is plain, the interior is decorated with fields alternately filled with vertical and oblique channelling. The surface is worn. Three fragments. Inv. no. 88.106.3 *(Pl. 45. 10)*.
4. Bowl. Rim and body fragments of a small, plain, thin-walled, funnel-necked bowl, Two fragments, both refitted from smaller pieces. dB. 6.5 cm. Inv. no. 88.106.4 *(Pl. 45. 11)*.
5. Bowl. Rim and body fragments of a dark greyish, slightly funnel-necked bowl, decorated with vertical combed bands on the belly and wide vertical channelling on the rim interior. Refitted. Two fragments. 5.5 x 4 cm, 3.5 x 4.7 cm. Inv. no. 88.106.5 *(Pl. 45. 7)*.
6. Amphora. Rim and body fragments of a greyish, thick-walled amphora with globular body. A short, horizontal string-hole lug is preserved on two fragments. Three fragments. Inv. no. 88.106.6 *(Pl. 45. 12)*.

**Grave 450** (Trench 2/1)

The grave lacking a stone packing lay at a depth of 40 cm. Two broken bowls were placed beside the calcined bones: a funnel-necked bowl (1) and a semi-spherical one (2).

The calcined bone fragments from the grave weighed 26.3 g. The age and sex of the deceased could not be determined.

Grave goods

1. Bowl. Rim and body fragments of a large, reddish and dark greyish funnel-necked bowl, decorated with punctates and a small knob on the shoulder, and a deeply incised herringbone pattern on the belly. The rim interior is covered with wide oblique channelling, the base interior with partly converging oblique channelling. Refitted. Nine fragments. Inv. no. 88.107.1 *(Pl. 48. 13)*.
2. Bowl. Semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim. The exterior is plain, save for a light grooved line under the rim. The surface is worn. Refitted and extensively restored. H. 6.8–7.5 cm, dM. 23 cm, dB. 6.3 cm. Inv. no. 88.107.2 *(Pl. 48. 8)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

3. Bowl. Rim fragments of a small, brownish bowl with constricted neck. The surface is worn. Four fragments, one refitted from smaller ones. Inv. no. 88.107.3 *(Pl. 48. 10)*.
4. Amphora-like vessel. Rim and body fragments of a small, greyish, thick-walled vessel with outturned rim, short neck and globular body, decorated with a slender, nail-impressed cordon around the shoulder and pairs of slender vertical ribs. Four fragments. Inv. no. 88.107.4 *(Pl. 48. 11)*.
5. Amphora. Body fragment of a brownish amphora with furrowed strap handle. 6.9 x 5.6 cm. Inv. no. 88.107.5 *(Pl. 48. 12)*.
6. Pot. Rim fragment of a brownish, thick-walled pot, decorated with nail impressions under the rim and slender, finger-impressed cordon underneath. 5.6 x 7.2 cm. Inv. no. 88.107.6 *(Pl. 48. 9)*.

**Grave 451** (Trenches 1/1–1/2; *Pl. 48*)

The extremely large stone packing with a diameter of 3–4 m was made up of two or even three layers of stones. Its top was found at a depth of 30–50 cm in Trenches 1/1 and 1/2. The rather high amount of calcined bones lay under the middle of the stone packing, at a depth of 75 cm. A sheep figurine (1)

broken in four lay under the south-western edge of the stone packing. Fragments of several vessels (3–9) were found scattered under the western edge of the stone packing. The fragment of a clay cone (2) lay under the western edge of the packing and an obsidian flake (10) near its southern end.

The calcined bone fragments from the grave weighed 60.9 g. The remains came from a 20–59-year-old adult/mature man (?).

Grave goods

1. Animal figurine. Fragments of a sand-coloured animal figurine portraying a long-bodied sheep. Only the mouth is indicated by an incision on the triangular head. The left ear is triangular, the right ear is a reconstruction. The tail wags to the left. The tail broke off, the left hind leg is a reconstruction. L. 11.7 cm, 5.7 cm, H. 6.3 cm, Th. of body 3.7 cm. Inv. no. 88.108.1 *(Pl. 49.1)*.[115]
2. Clay cone. Fragment of the lower part of a clay cone with rectangular base, decorated with a vertically running zig-zag pattern on one side. H, 3.1 cm, 4 x 2.7 cm. Inv. no. 88.108.2 *(Pl. 48. 18)*.
3. Bowl. Rim and body fragments of a plain, brownish, funnel-necked bowl. Refitted. 15 x 11.8 cm. Inv. no. 88.108.3 *(Pl. 48. 14)*.
4. Bowl. Body fragment of a greyish bowl. The exterior is plain, the interior is covered by oblique channelling in alternating directions 3.7 x 5.8 cm. Inv. no. 88.108.4 *(Pl. 48. 20)*.
5. Pot. Rim and body fragments of a brownish, thin-walled, miniature pot with elongated S profile, decorated with a row of nail impressions under the rim and a small, unperforated string-hole lug springing from the rim. Three fragments, two refitted from smaller pieces. Inv. no. 88.108.5 *(Pl. 48. 15)*.
6. Pot. Rim fragment of a small, greyish, thin-walled pot, decorated with nail impressions under the rim and an incised, unfinished herringbone pattern on the body. 3.7 x 2.1 cm. Inv. no. 88.108.6 *(Pl. 48. 16)*.
7. Bowl. Body fragment of a greyish bowl, bearing one-half of an incised herringbone pattern (?). 4.1 x 2.9 cm. Inv. no. 88.108.7 *(Pl. 48. 21)*.
8. Bowl. Body fragment of a large, greyish bowl, decorated with a combed pattern. The surface is strongly worn. Refitted. 4.1 x 6.8 cm. Inv. no. 88.108.8 *(Pl. 48. 22)*.
9. Pot. Rim fragment of a small, greyish pot with a small string-hole lug springing from the rim. The perforation of the lug was begun at both ends. 2.6 x 2.5 cm. Inv. no. 88.108.9 *(Pl. 48. 17)*.
10. Obsidian flake. Dark grey obsidian flake with triangular section. L. 3.7 cm, W. 1.2 cm, Th. 0.7 cm. Inv. no. 88.108.10 *(Pl. 48. 19)*.

**Grave 452** (Trench 2/2; *Pl. 49*)

The loose stone packing with a diameter of 1,5 m lay at a depth of 90–100 cm in Trench 2/2. A bowl (1) with the mouth downward lay at a depth of 120 cm under the middle of the stone packing; a large pot (2) and a jug (3) tilted to one side were placed on it. Only a body fragment of the pot was deposited in the grave, while the other vessels were crushed by the weight of the stones. A relatively large amount of charcoal lay among the vessels.

Grave goods

1. Bowl. Rim fragments of a plain,, greyish, large, funnel-necked bowl. Two fragments, each refitted from smaller pieces. dM. *ca*. 30 cm. Inv. no. 88.109.1 *(Pl. 49. 3)*.

[115] Displayed at the permanent exhibition of the Hungarian National Museum.

2. Pot. Body fragments of a large, reddish, thick-walled pot with coarsened surface. Refitted. Four fragments. Inv. no. 88.109.2 *(Pl. 49. 4)*.
3. Jug. Greyish-brown biconical jug with slightly incurving neck and furrowed strap handle. The shoulder and the upper portion of the belly are covered with channelling arranged in a zig-zag pattern. There were three vertical subcutaneous handles on the belly. The originally polished surface is strongly worn. Refitted. H. 13 cm, dM. 10 cm, dB. 4.5 cm. Inv. no. 88.109.3 *(Pl. 49. 2)*.

**Grave 453** (Trenches 3/1–3/2; *Pl. 50*)

The large stone packing lying at a depth of 89–114 cm and the middle part of the grave in Trenches 3/1–3/2 were destroyed by a Celtic pit (Pit 2/72). The original form and size of the stone packing could not be determined owing to this intrusion. The relatively large amount of calcined bones lay in one heap under the middle of the stone packing, at a depth of 120 cm. The fragments of a pot or bowl (1) lay beside the calcined bones. The fragments of a bowl (2) lay under the eastern edge of the stone packing, those of a jug (3) under its south-western edge. A scatter of pottery sherds (4–12) was found under the edge of the stone packing. Two chipped stone implements (13–14) were also part of the grave inventory.

The calcined bone fragments from the grave weighed 49 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Pot. Rim and body fragments of a greyish-brown pot with slightly outturned rim and elongated S profile, decorated with nail impressions on the rim. Four fragments. Inv. no. 88.110.1 *(Pl. 50. 1)*.
2. Bowl. Rim fragments of a light brownish, funnel-necked bowl, decorated with vertical channelling on the rim interior and oblique channelling in alternating directions arranged in a triangle pattern. The surface is strongly worn. Three fragments. Inv. no. 88.110.2 *(Pl. 50. 2)*.
3. Jug. Body fragments of a reddish-brown, grey mottled jug, decorated with pairs of vertical channelling and oblique channelling, now very worn. Three fragments have a vertical subcutaneous handle formed towards the vessel interior, while the stub of a handle survives on the fourth fragments. The surface is worn. Four fragments. Inv. no. 88.110.4 *(Pl. 50. 9)*.
4. Mug. Fragments of a light brownish, plain mug with incurving neck and globular body. The stub of the handle survives. Refitted. 5.2 x 4.7 cm. Inv. no. 88.110.3 *(Pl. 50. 5)*.
5. Mug. Rim and body fragment of a greyish, thin-walled mug with incurving neck and squat, globular body. 3.5 x 3.1 cm. Inv. no. 88.110.5 *(Pl. 50. 6)*.
6. Bowl. Rim fragments of a plain, brownish, funnel-necked bowl. The surface is worn. Two fragments. 5.6 x 10.2 cm, 3.7 x 3.5 cm. Inv. no. 88.110.6 *(Pl. 50. 4)*.
7. Pot. Rim and body fragments of a light brownish, thick-walled pot, decorated with a finger-impressed cordon under the rim. The surface is coarsened. Two fragments, one refitted from smaller pieces. 5.7 x 2.9 cm, 8.6 x 8.9 cm. Inv. no. 88.110.7 *(Pl. 50. 3)*.
8. Bowl. Body fragment of a greyish, thin-walled bowl, decorated with dense combing. 5.3 x 3.8 cm. Inv. no. 88.110.8 *(Pl. 50. 7)*.
9. Amphora. Body fragments of a large, plain, greyish amphora. Refitted. 4.9 x 4.7 cm. Inv. no. 88.110.9.
10. Bowl. Rim fragment of a light brownish, funnel-necked bowl, decorated with light oblique channelling in alternating directions arranged in a triangle pattern on the rim interior. The surface is worn. 4.8 x 6.7 cm. Inv. no. 88.110.10 *(Pl. 50. 8)*.

11. Amphora. Body fragment of a brownish, thick-walled amphora, decorated with a pair of small knobs. 6 x 6 cm. Inv. no. 88.110.11 *(Pl. 50. 12)*.
12. Amphora. Body fragments of a larger, brownish amphora, decorated with a wider nail-impressed cordon around the belly and a slender, similarly nail-impressed cordon underneath. Two fragments, one refitted from smaller pieces. 7.3 x 9.3 cm, 4.6 x 4.8 cm. Inv. no. 88.110.12 *(Pl. 50. 11)*.

13–14. Flake, broken in two. Triangular chipped stone implement of reddish chert. L. 3.1 cm, W. 2.3 cm, Th. 0.4 cm. Inv. no. 88.110.13 *(Pl. 50. 10)*.

**Grave 454** (Trench 3/1; *Pl. 50*)

The calcined bones, among which there were also pieces of charcoal, lay in one heap under the middle of the round stone packing with a diameter of roughly 2 m. The small fragments of a bowl (1) and a jug (2) lay scattered around the calcined bones, while the fragments of a few bowls (3–4) and pots (5–6) were found under the edge of the stone packing.

The calcined bone fragments from the grave weighed 45.9 g. The remains came from a 20–x-year-old adult, whose sex could not be determined.

Grave goods

1. Bowl. Rim fragments of a large, brownish, thick-walled, funnel-necked bowl, decorated with wide vertical channelling on the rim. The surface is strongly worn. Two fragments. 6.3 x 7.7 cm, 5.5 x 3.5 cm. Inv. no. 88.111.1 *(Pl. 50. 17)*.
2. Jug. Fragment of the furrowed strap handle of a reddish-brown jug. The surface is worn. Refitted. 2 x 7 cm. Inv. no. 88.111.6 *(Pl. 50. 13)*.
3. Bowl. Rim and body fragment of a light brownish, thin-walled, funnel-necked bowl, without any traces of ornamentation. The surface is strongly worn. 7.6 x 8.6 cm. Inv. no. 88.111.3 *(Pl. 50. 19)*.
4. Beaker (?). Rim fragment of a greyish-brown, thin-walled beaker (?) with elongated S profile, decorated with a row of punctates under the rim and faint traces of what was perhaps oblique channelling on the belly. The surface is strongly worn. 5.5 x 5.9 cm. Inv. no. 88.111.4 *(Pl. 50. 16)*.
5. Pot. Rim and body fragments of a brownish pot with elongated S profile and a short strap handle springing from the rim, decorated with a slender, finger-impressed cordon interrupted by the handle under the rim. Two fragments, each refitted from smaller pieces. 5.3 x 2.9 cm, 7.5 x 9.4 cm. Inv. no. 88.111.2 *(Pl. 50. 15)*.
6. Pot. Rim fragment of a light brownish pot, decorated with a double row of punctates under the rim. 2.7 x 2.5 cm. Inv. no. 88.111.5 *(Pl. 50. 18)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

7. Chert flake, broken in two. Two dirty white coloured chert flakes. L. 2.5 cm, W. 1.4 cm, Th. 0.2 cm. Inv. no. 88.111.7 *(Pl. 50. 14)*.

**Grave 455** (Trenches 3/1–3/2; *Pl. 50*)

The stone packing measuring roughly 2 m in diameter lay at a depth of 94 cm on the boundary of Trenches 3/1 and 3/2, and partly overlapped with the packing of Graves 453 and 454. A few smaller

calcined bones and a pot (1) as well as fragments probably coming from bowls (2–5) lay beside the human remains.

Grave goods

1. Pot. Small, thin-walled, conical pot, decorated with three rows of punctates under the rim and a horizontal herringbone pattern on the body. Two wide handles spring from the rim opposite each other.[116] H. 6–7 cm, dM. 8.5 cm, dB.3.6 cm. Inv. no. 88.112.1 *(Pl. 50. 23)*.
2. Bowl. Rim fragments of a small, brownish, plain, semi-spherical bowl with flat rim. The surface is strongly worn. Refitted. Two fragments. 2.6 x 5.6 cm, 2.3 x 7 cm. Inv. no. 88.112.2 *(Pl. 50. 20)*.
3. Bowl. Rim fragment of a plain, brownish, funnel-necked bowl. The surface is strongly worn. 3.1 x 2.7 cm. Inv. no. 88.112.3 *(Pl. 50. 24)*.
4. Bowl. Rim fragment of a plain, greyish-brown, thin-walled, funnel-necked bowl. 2 x 3.3 cm. Inv. no. 88.112.4 *(Pl. 50. 21)*.
5. Bowl. Body fragment of a brownish, funnel-necked bowl, decorated with nail impressions around the shoulder. The surface is worn. 2.5 x 3.8 cm. Inv. no. 88.112.5 *(Pl. 50. 22)*.

**Grave 456** (Trench 1/2)

The grave's loose stone packing measuring 1.8 m in diameter lay at a depth of 110–120 cm in Trench 1/2. Fragments of a funnel-necked bowl (1), originally set upright, lay under the stones. A few sherds of a semi-spherical vessel (2) were found 40 cm from the previous vessel, while a few fragments of a jug (3) lay under the western edge of the stone packing. No more than one or two extremely tiny calcined bone fragments were found, which could not be preserved.

Grave goods

1. Bowl. Rim and body fragments of a brownish, funnel-necked bowl, decorated with a row of punctates around the shoulder and small knobs resembling unperforated string-hole lugs. The neck interior is covered with vertical channelling, now very faint. The surface is worn. Two fragments, each refitted from smaller pieces. dM. *ca*. 21 cm. Inv. no. 88.113.1 *(Pl. 50. 27)*.
2. Bowl. Rim and body fragments of a brownish, semi-spherical bowl, decorated with dense vertical channelling on the rim. Three fragments, all refitted from smaller pieces. Inv. no. 88.113.2 *(Pl. 50. 26)*.
3. Jug. Body fragments of a greyish jug with the stub of the handle. Vertical channelling divides the belly into fields filled with oblique channelling in alternating directions. The surface is worn. Three fragments, each refitted from smaller pieces. Inv. no. 88.113.3 *(Pl. 50. 25)*.

**Grave 457** (Trench 1/2; *Pl. 51*)

The stone packing of the grave lay at a depth of 70–100 cm in Trench 1/2. A bowl (1), with its mouth downward, and a jug (2) lay under the triangular packing measuring 1.5–2 m in length. Both vessels were crushed into tiny fragments by the weight of the stones. The fragments of a bowl (3) and of three miniature vessels (4–6) lay under the eastern end of the stone packing. The latter were dislodged from their original position when the stone packing was found.

[116] This vessel can no longer be found. Its description is based on the photo in the collection of the Archaeological Institute of the Hungarian Academy of Sciences.

Grave goods

1. Bowl. Rim and body fragments of a reddish-brown, funnel-necked bowl. The exterior is plain, the rim interior is covered with oblique channelling in alternating directions arranged in a triangle pattern. Refitted. Two fragments. dM. *ca*. 20 cm. Inv. no. 88.114.1 *(Pl. 51. 1)*.
2. Jug. Rim and body fragments of a reddish-brown jug with furrowed strap handle. Pairs of vertical ribs divide the belly into fields filled with oblique channelling. The surface is worn. Two fragments, each refitted from smaller pieces. 8.1 x 6.1 cm. Inv. no. 88.114.2 *(Pl. 51. 2)*.
3. Bowl. Rim and body fragments of a brownish, funnel-necked bowl with plain exterior. The rim interior is covered with fields alternately filled with vertical and oblique channelling. The surface is strongly worn. Refitted. Seven fragments. (Some pottery sherds found in Graves 450 and 451 could be joined to the fragments of this vessel.) Inv. no. 88.114.3 *(Pl. 51. 5)*.
4. Miniature pot. Plain, brownish, thin-walled, miniature pot with elongated S profile. Refitted and extensively restored. H. 6.3 cm, dM. 6 cm, dB. 3.4 cm. Inv. no. 88.114.4 *(Pl. 51. 6)*.
5. Miniature pot. Plain, brownish, thin-walled, miniature pot with elongated S profile. Refitted; the rim is largely a reconstruction. H. 5.9 cm, dM. 6.5 cm, dB. 2.5 cm. Inv. no. 88.114.5 *(Pl. 51. 7)*.
6. Miniature lid. Light brownish, conical lid, decorated with dense, vertical grooving along the edge and two pairs of incised triangles fiilled with oblique hatching touching at the tips. Diam. 5.1 cm. Inv. no. 88.114.6 *(Pl. 51. 4)*.

The following artefacts, identified after the washing and the conservation of the grave goods, can also be associated with this burial:

7. Amphora. Shoulder fragments of a light brownish, thin-walled amphora, decorated with a triple, finger-impressed cordon around the shoulder. Two joining fragments. (One of the pottery sherds from Grave 450 could be refitted with the fragments of this vessel.) 4.9 x 5.2 cm, 4 x 4 cm. Inv. no. 88.114.7 *(Pl. 51. 3)*.
8. Jug. Rim and body fragment of a reddish-brown, grey mottled, biconical jug with slightly incurving neck, decorated with oblique channelling on the belly. The surface is worn. 6.3 x 5.6 cm. Inv. no. 88.114.8 *(Pl. 51. 8)*.
9. Pot. Rim fragments of a brownish, thin-walled pot, decorated with two rows of punctates under the rim. Two fragments. 4.2 x 5.1 cm, 2.7 x 2.6 cm. Inv. no. 88.114.9 *(Pl. 51. 9)*.

**Grave 458** (Trench 3/7)

A larger portion of the stone packing with a diameter of 1.5 m was missing. It lay at a depth of 255–265 cm in Trench 3/7. The fragments of several vessels (1–3) lay scattered under the stones. No calcined bones were found in the grave.

Grave goods

1. Jug. Rim and body fragments of a brownish, thin-walled, biconical jug with incurving neck, decorated with alternating fields of vertical and oblique channelling on the belly. Refitted. Three fragments. Inv. no. 88.115.1 *(Pl. 51. 12)*.
2. Handle. Fragment of a reddish-brown, thick, furrowed strap handle. Refitted. 3.9 x 7.2 cm. Inv. no. 88.115.2 *(Pl. 51. 10)*.

3. Amphora. Rim and body fragments of a brownish amphora, decorated with a pair of slender, nail-impressed cordons around the shoulder. Two fragments, each refitted from smaller pieces. Inv. no. 88.115.3 *(Pl. 51. 11)*.

**Grave 459** (Trench v/3; *Pl. 49* )

A heap of stones resembling the stone packing of graves lay at a depth of 135–140 cm near the trench's eastern corner. The loose stone packing measuring 1.5 m in diameter was more or less triangular. The fragments of four vessels lay in a heap under the stone packing, near its eastern edge: the fragments of a funnel-necked bowl (1), a globular bowl decorated with pendent triangles (2), a mug with a lattice pattern (3) and jug with pendent triangles (4). There were no calcined bones in the grave.

Grave goods

1. Bowl. Rim and body fragments of a brownish, thin-walled, funnel-necked bowl, decorated with a flat knob perforated in two adjacent spots on the shoulder. The surface is worn. Refitted and restored. H. 8.3 cm, dM. *ca*. 21 cm. Inv. no. 88.133.1 *(Pl. 49. 5)*.
2. Bowl. Greyish, biconical bowl with slightly outturned rim and short neck, decorated with a vertical line encircling the shoulder and incised pendent triangles filled with parallel horizontal lines. The surface is worn. Refitted and largely restored. H. 6 cm, dM. 14 cm, dB. 12 cm. Inv. no. 88.133.2 *(Pl. 49. 8)*.
3. Jug. Rim and body fragments of a greyish, biconical vessel with short, incurving neck, decorated with a lime encrusted double groove around the neck and a design of triangles filled with a lattice pattern (?), with the lime encrustation preserved in some spots. The surface is worn. Inv. no. 88.133.3 *(Pl. 49. 7)*.
4. Jug. Rim and body fragment of a brownish, thin-walled jug with incurving neck, decorated with a *Furchenstich*-style line around the shoulder and pendent triangles filled with *Furchenstich*-style hatching. H. 7.1. cm, dM. *ca*. 12 cm. Inv. no. 88.133.4 *(Pl. 49. 6)*.

## Miscellaneous finds from the area of the cemetery

### 1. Unstratified finds from the excavation trenches

**Trenches D/5–E/5** (-125 cm)

1. Bowl. Body and base fragments of a brownish bowl, decorated with an incised meander pattern of multiple lines and triangles touching at the tips made in the *Furchenstich* style with remnants of the lime encrustation. The surface is worn, Three fragments. Inv. no. 88.129.1 *(Pl. 52. 10)*.[117]
2. Mug. Body fragment of a brownish, thin-walled mug, decorated with a small pointed knob. 4.7 x 3.4 cm. Inv. no. 88.129.2.

**Trench u/4**, middle section (-90 cm).

1. Bowl. Rim and body fragments of a plain, greyish, funnel-necked bowl. Three fragments. Inv. no. 88.130.1.

[117] Torma 1973, Abb. 12. 3, 5–6.

**Trench ü/4** (?)

1. Mug (?). Lower half of squat, globular mug with cylindrical (?) neck and a narrow, furrowed strap handle. Traces of faint channelling, perhaps arranged in a triangle pattern, survive on the belly. Refitted and restored; however, the vessel form was restored incorrectly. dB. 4 cm. Inv. no. 88.143.1 *(Pl. 52. 2)*.

**Trench z/3**

1. Amphora. Body fragment of a greyish, thick-walled amphora with a thick strap handle. 5.3 x 8 cm. Inv. no. 88.137.1.

**Trench z/6**

1. Bowl. Rim and body fragments of a plain, brownish-grey, funnel-necked bowl. The surface is strongly worn. Two fragments. 8.6 x 6.3 cm, 8.5 x 10.1 cm. Inv. no. 88.138.1.
2. Bowl. Rim and body fragment of a greyish, semi-spherical bowl. The surface is strongly worn. 9.8 x 6.4 cm. Inv. no. 88.138.2.

**Trench zs/5** (-176 cm).

1. Amphora. Rim fragment of a reddish amphora with a string-hole lug springing from the rim. The surface is worn. Refitted. 6.3 x 4.8 cm. Inv. no. 88.140.1.
2. Pot. Rim fragment of a brownish pot with elongated S profile, decorated with a grooved cordon under the neck. The surface is strongly worn. 3.5 x 5.6 cm. Inv. no. 88.140.2.
3. Bowl. Body fragment of a small, reddish-brown, thin-walled bowl, decorated with vertical combing. 4.5 x 3.1 cm. Inv. no. 88.140.3.

**Trench ü/3** (-115 cm).

1. Bowl. Plain, brownish, thin-walled, conical bowl. The surface is worn. dM. 5 cm. Inv. no. 88.131.1 *(Pl. 52. 9)*.[118]
2. Pot. Small brownish pot with elongated S profile, decorated with two horizontal, furrowed string-hole lugs set opposite each other on the rim. The lugs have an incomplete perforation. The surface is worn. Refitted and restored. L. 5.3 cm, dM. 7 cm, dB. 3.3 cm. Inv. no. 88.131.2 *(Pl. 52. 11)*.

**Boundary of Trenches zs/2–x/2**

1. Bowl. Rim fragment of a large, reddish-brown, funnel-necked bowl. The surface is strongly worn. 9.7 x 4.6 cm. Inv. no. 88.139.1.
2. Bowl. Rim fragment of a brownish, funnel-necked bowl, with remnants of vertical channelling on the rim. The surface is strongly worn. 4.5 x 7.2 cm. Inv. no. 88.139.2.
3. Pot. Rim fragment of a reddish-brown pot with elongated S profile, decorated with a pair of barely prominent, finger-impressed cordons under the rim. 6.1 x 6.1 cm. Inv. no. 88.139.3.

**Trench x/4**

1. Bowl, Rim and body fragment of a large, greyish, funnel-necked bowl. The rim interior is decorated with triangles filled with oblique channelling in alternating directions. The surface is worn. Inv. no. 88.134.1.
2. Bowl. Rim fragment of a plain, greyish, thick-walled, semi-spherical bowl. The surface is worn. 10.8 x 7.9 cm. Inv. no. 88.134.2.

[118] TORMA 1973, Abb. 2. 6.

3. Bowl. Rim and body fragments of a plain, greyish, thin-walled, funnel-necked bowl. The surface is strongly worn. Two fragments. 4.8 x 6.7 cm, 7.6 x 4.3 cm. Inv. no. 88.134.3.
4. Bowl. Rim and body fragments of a plain, light brown, semi-spherical bowl with flat rim. The surface is worn. 6.2 x 9 cm. Inv. no. 88.134.4.
5. Bowl. Body fragment of a greyish bowl, decorated with vertical combing. The surface is worn. 11.3 x 9.3 cm. Inv. no. 88.134.5.
6. Jug (?). Rim and body fragment of a greyish jug with incurving neck, decorated with vertical channelling on the belly. The surface is worn. 5.7 x 4.5 cm. Inv. no. 88.134.6.
7. Pot. Rim fragment of a greyish pot with elongated S profile, decorated with a finger-impressed cordon under the rim. 5.3 x 4.5 cm. Inv. no. 88.134.7.

**Trenches y/2– y/3**, from the area between Graves 408–409–410

1. Bowl. Rim and body fragment of a greyish, plain, thin-walled, semi-spherical bowl. The surface is worn. 6.4 x 5.6 cm. Inv. no. 88.135.1.
2. Bowl. Body fragment of greyish bowl, decorated with an incised herringbone pattern. 3.9 x 3.4 cm. Inv. no. 88.135.2.
3. Jug handle. Brownish, round-sectioned jug handle decorated with horizontal channelling. 4.5 x 1.9 cm. Inv. no. 88.135.3.

**Trench y/6**

1. Bowl. Rim fragments of a greyish, thin-walled bowl decorated with horizontal and oblique incised lines combined with impressed dots under the rim. Two fragments. 3.8 x 2.6 cm, 4.1 x 2.7 cm. Inv. no. 88.136.1.
2. Bowl. Rim and body fragments of a large, greyish, thick-walled, funnel-necked bowl, decorated with barely visible channelling on the rim interior. The surface is worn. Two fragments. 11 x 9 cm, 9 x 6.4 cm. Inv. no. 88.136.2.
3. Pot. Rim fragments of a reddish-grey pot with elongated S profile, decorated with oblique nail impressions under the rim. The surface is strongly worn. Two fragments. 4.8 x 5.1 cm, 4.3 x 6.4 cm. Inv. no. 88.136.3.
4. Pot. Body fragment of a reddish pot with elongated S profile, decorated with two grooved cordons. The surface is worn. 4.7 x 6.2 cm. Inv. no. 88.136.4.
5. Amphora. Rim fragment of a greyish, thick-walled amphora with slightly outturned rim, decorated with two rows of punctates under the rim and three small round knobs underneath. The surface is slightly worn. 4.9 x 4 cm. Inv. no. 88.136.5.
6. Bowl. Rim fragment of a greyish bowl with a furrowed string-hole lug springing from the rim. The surface is strongly worn. 3 x 2.8 cm. Inv. no. 88.136.6.
7. Amphora. Body fragment of a thick-walled amphora with a thick strap handle. The surface is worn. 4.8 x 3.9 cm. Inv. no. 88.136.7.

**Trench 1/3**

1. Pot. Body fragment from under the rim of a light brownish pot with elongated S profile, decorated with a row of punctates under the rim. 3 x 4.7 cm. Inv. no. 88.116.1.

**Trench 2/2**

1. Bowl. Rim, body and base fragments of a brownish, funnel-necked bowl, decorated with a row of stabs around the shoulder and dense vertical channelling on the rim interior. The surface is worn. Three fragments. Inv. no. 88.117.1.
2. Bowl. Rim fragments of a plain, reddish, small, funnel-necked bowl. The surface is worn. Three fragments. Inv. no. 88.117.2.
3. Bowl. Rim and body fragments of a greyish, thick-walled, funnel-necked bowl, decorated with vertically incised lines on the rim and a barely visible incised herringbone (?) pattern on the belly. The surface is worn. Two fragments. 4.6 x 8.1 cm, 5.2 x 4.4 cm. Inv. no. 88.117.3.
4. Bowl. Rim and body fragment of a small, brownish, thin-walled, semi-spherical bowl, decorated with lightly incised vertical lines. 4.4 x 3.5 cm. Inv. no. 88.117.4.
5. Bowl. Body fragment of a greyish, thin-walled, funnel-necked bowl, decorated with a row of punctates around the belly. The surface is worn. 3.8 x 6.6 cm. Inv. no. 88.117.5.
6. Jug. Belly fragment of a brownish jug, with a broken subcutaneous handle formed towards the vessel interior. The body is divided into fields filled with oblique channelling in alternating directions flanked by double and triple slender ribs. The surface is worn. Two fragments. 4.8 x 5.7 cm, 6.4 x 7.2 cm. Inv. no. 88.117.6.
7. Jug. Body, base and handle fragments of a grey, thin-walled jug with a furrowed strap handle, decorated with channelling arranged in a triangle pattern. The surface is worn. Two fragments, one refitted from smaller fragments. L. of fragment 3.2 cm, dB. 4 cm. Inv. no. 88.117.7.
8. Jug. Body fragment of a plain, greyish jug and a fragment of its furrowed strap handle. The surface is worn. Two fragments. 5.5 x 4.9 cm, 1.9 x 4.3 cm (handle). Inv. no. 88.117.8.
9. Handle. Fragment of a brownish, furrowed strap handle. The surface is worn. 3 x 3.2 cm. Inv. no. 88.117.9.
10. Bowl. Rim fragment of a brownish, thin-walled, funnel-necked bowl, decorated with dense vertical channelling on the rim and a row of punctates on the shoulder. The surface is worn. 2.9 x 3.6 cm. Inv. no. 88.117.10.

**Trench 3/3**, south-western corner

1. Pot. Rim fragments of a large, brownish pot with elongated S profile, decorated with a double row of punctates, interrupted by a furrowed string-hole lug springing from the rim. Originally refitted from smaller fragments. Three fragments. Inv. no. 88.119.1.
2. Jug. Rim, body and base fragments of a greyish, thin-walled jug, decorated with channelling arranged in triangles with downward pointing tips, now very faint. The surface is worn. Two fragments. L. 5.8 cm. Inv. no. 88.119.2.
3. Bowl. Rim fragment of a plain, greyish, semi-spherical bowl. The surface is worn. 3.8 x 3.9 cm. Inv. no. 88.119.3.

**Trench 3/4**, by the south-western wall

1. Amphora. Rim and body fragment of a brownish, thin-walled, urn-like amphora with incurving neck, decorated with a barely prominent slender cordon bearing a pattern of punctates encircling the shoulder and dense combing underneath. The surface is worn. 6.9 x 5.9 cm. Inv. no. 88.120.1.

**Trench 3/4**, 10–15 cm above the level of the Copper Age graves

1. Rollers. Fragments of brownish, worn, cylindrical rollers with slightly incurving body. Their surface is worn. Two pieces. L. 2.4 cm, 2.5 cm, diam. 2.9 cm, 3 cm. Inv. no. 88.120.2 *(Pl. 52. 7)*.
2. Spindle whorl. Plain, greyish, conical spindle whorl with vertical perforation. L. 1.6 cm, diam. 5.7 cm. Inv. no. 88.120.3 *(Pl. 52. 6)*.
3. Animal figurine.[119] Greyish, thick-bodied animal figurine with triangular head portraying a sheep. The eyes are indicated with incised lines, the nostrils with impressed dots, the mouth with an incision. The right foreleg has a "hind toe". The tail hangs straight down. The right ear and the right hind leg have been restored L. 21 cm, H. 10.6 cm, Th. of body 4 cm. Currently displayed at the permanent exhibition of the Hungarian National Museum *(Pl. 51. 13)*.

**Trench 4/1**

1. Bowl. Rim and body fragments of a dark greyish, conical bowl with slightly incurving neck, decorated with vertical channelling on the exterior. The surface is worn. Three fragments. Inv. no. 88.121.1.
2. Bowl (?). Rim fragment of a brownish, thick-walled, semi-spherical bowl, decorated with a row of punctates under the rim. 5 x 4.1 cm. Inv. no. 88.121.2.

**Trenches 4/2–4/3**

1. Bowl. Rim fragment of a large, brownish, funnel-necked bowl, decorated with dense vertical channelling on the rim and oblique channelling in alternating directions arranged in a triangle pattern on the rim interior. 7.3 x 4 cm. Inv. no. 88.122.1.
2. Bowl. Rim fragment of a large, greyish, funnel-necked bowl, decorated with dense vertical channelling on the rim interior. The vessel body was originally polished. 7.1 x 5.1 cm. Inv. no. 88.122.2.
3. Bowl. Rim fragment of a brownish, semi-spherical bowl with flat rim, decorated with vertical channelling arranged in two rows on the rim. 5.3 x 3.8 cm. Inv. no. 88.122.3.
4. Bowl. Rim fragment of a brownish, thick-walled, funnel-necked bowl. 4.6 x 4.7 cm. Inv. no. 88.122.4.
5. Bowl. Rim fragments of a brownish, semi-spherical bowl with flat rim, decorated with dense channelling on the rim and alternating vertical and oblique channelling in the interior. Two fragments. 2.7 x 4.8 cm, 3.3 x 4.3 cm. Inv. no. 88.122.5.
6. Pot. Rim fragment of a brownish pot with elongated S profile, decorated with a barely prominent, grooved cordon under the rim and a small round knob on the shoulder. 4 x 4.6 cm. Inv. no. 88.122.6.
7. Pot. Rim fragment of a brownish pot with elongated S profile, decorated with punctates on the rim. 4 x 2.8 cm. Inv. no. 88.122.7.
8. Pot. Rim fragment of a brownish, thin-walled pot with a short strap handle springing from the rim 3.4 x 2.8 cm. Inv. no. 88.122.8.
9. Amphora. Body fragment of a brownish, thick-walled amphora with a thick handle. Refitted. 3.5 x 6.3 cm. Inv. no. 88.122.9.
10. Bowl. Body fragment of a brownish bowl, decorated with dense vertical combing. 7.7 x 2.5 cm. Inv. no. 88.122.10.

[119] TORMA 1975, Taf. 55. 4.

**Trench 4/5**, from under the baulk

1. Bowl. Rim fragments of a large, brownish, funnel-necked bowl, decorated with oblique channelling in alternating directions arranged in a triangle pattern on the rim interior. Two fragments. 5.1 x 7.8 cm, 6.3 x 5.2 cm. Inv. no. 88.123.1.
2. Bowl. Body fragment of a large, greyish, thick-walled, funnel-necked bowl, decorated with oblique channelling in alternating directions arranged in a triangle pattern in the interior. 5.3 x 8.2 cm. Inv. no. 88.123.2.
3. Bowl. Body fragment of a large, greyish bowl, decorated with a row of punctates around the shoulder; the vessel body is smeared underneath. 5.5 x 12.3 cm. Inv. no. 88.123.3.

**Trench 5/1** (-103 cm).

1. Amphora. Body fragment of a brownish amphora with a medium thick strap handle. 9 x 7.3 cm. Inv. no. 88.124.1.
2. Bowl. Rim fragment of a greyish, funnel-necked bowl, decorated with oblique channelling in alternating directions arranged in a triangle pattern on the rim interior. The surface is worn. 3.4 x 4.8 cm. Inv. no. 88.124.2.
3. Amphora. Body fragment of a reddish-brown amphora, decorated with a slender, grooved cordon around the shoulder. The surface is worn. 7.3 x 5 cm. Inv. no. 88.124.3.

**Trenches 5/2–5/3**

1. Bowl. Rim fragment of a large, brownish, funnel-necked bowl, decorated with wide vertical channelling on the rim interior. 4.4 x 5.6 cm. Inv. no. 88.125.1.
2. Jug. Body fragment of greyish jug, decorated with vertical and oblique channelling, and a vertically perforated subcutaneous handle formed toward the vessel interior. The surface is worn. 4.8 x 6.3 cm. Inv. no. 88.125.2.
3. Bowl. Rim and body fragment of a large, brownish, thick-walled, funnel-necked bowl, decorated with dense vertical channelling on the rim. The surface is strongly worn. 7.4 x 8.4 cm. Inv. no. 88.125.3.

**Trenches 5/2–6/2**

1. Amphora. Rim fragment of a plain, brownish amphora. The surface is strongly worn. 7.3 x 7.1 cm. Inv. no. 88.126.1.
2. Bowl. Rim and body fragments of a plain, brownish, thin-walled, funnel-necked bowl. The surface is worn. Two fragments. 4.5 x 6.5 cm, 3.5 x 5.6 cm. Inv. no. 88.126.2.
3. Amphora. Rim fragments of a reddish amphora, with the stub of the short strap handle springing from the rim. Two fragments. 4.7 x 5.8 cm, 4.1 x 5.1 cm. Inv. no. 88.126.3.
4. Cup. Grey, thin-walled cup, decorated with vertical channelling on the belly. The rim is chipped, the handle broke off. The surface is strongly worn. Refitted. dM. 9.5 cm, H. 4 cm. Inv. no. 88.126.4 *(Pl. 52. 12)*.

**Trenches 7/2–7/3**

1. Bowl. Rim and body fragment of a funnel-necked bowl with reddish exterior and greyish interior, decorated with oblique channelling in alternating directions arranged in a triangle pattern on the rim interior and dense combed decoration on the belly. The originally polished surface is strongly worn. 11 x 4.8 cm. Inv. no. 88.127.1.

2. Bowl. Rim and body fragment of a brownish, funnel-necked bowl, decorated with a row of punctates around the belly and incised lines underneath. The stub of a horizontally set string-hole lug survived on the fragment. 6 x 5 cm. Inv. no. 88.127.2.

**Trenches 8/1–8/2**

1. Jug. Fragment of a greyish, wide jug handle with a double furrow. The surface is worn. 2.1 x 5.9 cm. Inv. no. 88.128.1.
2. Jug. Body fragment of greyish jug with the stub of a subcutaneous handle formed towards the vessel interior, decorated with wide channelled bands and herringbone-like oblique channelling in the bands on the belly. The surface is worn. 4.8 x 3.8 cm. Inv. no. 88.128.2.
3. Jug (?). Body fragment of a greyish, thick-walled jug made from clay tempered with mica, decorated with a pattern of seven parallelly incised lines under the stub of the handle. 6.1 x 7.4 cm. Inv. no. 88.128.3.
4. Bowl. Rim fragment of a plain, brownish, semi-spherical bowl. The surface is worn. 4.9 x 6.2 cm. Inv. no. 88.128.4.
5. Bowl. Body fragment of a brownish bowl, decorated with a row of punctates around the shoulder and oblique incised lines on the belly. The surface is strongly worn. 4 x 5.3 cm. Inv. no. 88.128.5.
6. Bowl. Body fragment of a brownish bowl, decorated with a row of punctates around the shoulder. The surface is worn. 6.1 x 4.6 cm. Inv. no. 88.128.6.

**2. Grave goods from miscellaneous graves**

1. Bowl. Brownish, thin-walled, conical bowl, decorated with stabs around the shoulder and eight more or less evenly spaced small round knobs. The surface is strongly worn. Refitted and restored. H. 6 cm, dM. 17 cm, dB. 5.5 cm. Inv. no. 88.141.1 *(Pl. 52. 1)*.
2. Bowl (?). Lower half of a large, brownish, thick-walled bowl (?) with a horizontally set, vertically perforated furrowed string-hole lug. The base interior is decorated with vertical and horizontal channelling arranged in a triangle pattern. Refitted and restored. Two fragments. H. 13.5 cm, dB. 13.5 cm. Inv. no. 88.142.1.
3. Bowl. Rim and body fragments of a large, greyish, funnel-necked bowl, decorated with wide vertical channelling on the rim, now strongly worn. The exterior is plain. Six fragments. Inv. no. 88.144.1.
4. Bowl. Rim and body fragments of a large, reddish, funnel-necked bowl, decorated with four sets of round impressions on the shoulder and wide vertical channelling on the rim interior. The surface is strongly worn. Four fragments. Inv. no. 88.145.1.
5. Bowl. Rim, body and base fragments of a large, greyish-brown, funnel-necked bowl, decorated with a row of punctates around the shoulder and oblique channelling in alternating directions arranged in a triangle pattern on the rim interior. Eleven fragments. Inv. no. 88.146.1.
6. Bowl. Rim, body and base fragments of a reddish, funnel-necked bowl, decorated with dense vertical channelling on the rim and knobs on the shoulder, either singly or in pairs. The surface is strongly worn. Thirteen fragments. dM. *ca*. 32 cm, dB. 8.5 cm. Inv. no. 88.147.1.
7. Jug. Body fragments of a dark grey jug with a broken vertical subcutaneous handle formed toward the vessel interior, decorated with fine oblique channelling in alternating directions arranged in a triangle pattern on the belly. The surface was originally polished. Refitted. Three fragments. Inv. no. 88.148.1.

8. Bowl. Rim fragment of a large, reddish-brown, funnel-necked bowl, decorated with wide, vertical channelling on the rim interior, now worn. The surface is strongly worn. 17.5 x 10 cm. Inv. no. 88.149.1.
9. Bowl. Rim fragment of a greyish, funnel-necked bowl, decorated with oblique channelling in alternating directions arranged in a triangle pattern on the rim interior. The surface is strongly worn. Refitted. 10 x 5.5 cm. Inv. no. 88.150.1.
10. Bowl. Rim and body fragments of a large, greyish, thick-walled, funnel-necked bowl, decorated with wide oblique channelling on the rim interior. The surface is worn. Four fragments. Inv. no. 88.151.1.
11. Bowl. One-half of a greyish, semi-spherical bowl with flat rim, decorated with dense vertical channelling on the rim. The interior bears a design of radially arranged bundles of channelling with oblique channelling between the bundles and spiraliform channelling on the base interior. The surface is worn. Two fragments. H. 8 cm, dM. *ca*. 32 cm, dB. 7.7 cm. Inv. no. 88.152.1 *(Pl. 52. 3)*.
12. Bowl. Rim fragment of a large, reddish, semi-spherical bowl, decorated with vertical channelling on the rim. The surface is worn. 13.2 x 12.5 cm. Inv. no. 88.153.1.
13. Amphora. Rim and body fragments of a greyish-brown amphora with elongated S profile. The surface is worn. Four fragments. Inv. no. 88.154.1.
14. Bowl. Rim fragments of a greyish, semi-spherical bowl, decorated with dense, vertical channelling on the rim and oblique channelling in the bowl interior. The pattern cannot be reconstructed. The surface is worn. Two fragments. 5.6 x 5.3 cm. Inv. no. 88.155.1.
15. Amphora. Body and base fragments of a large, greyish amphora. The surface is worn. Two fragments. dB. 11.3 cm. Inv. no. 88.156.1.
16. Bowl. Rim fragments of a reddish, slightly funnel-necked bowl. The surface is strongly worn. Refitted and restored to some extent. Two fragments. dM. *ca*. 33 cm. Inv. no. 88.157.1.
17. Pot. Rim and body fragments of a brownish, thin-walled pot with elongated S profile, decorated with an incised herringbone (?) pattern. The surface is strongly worn. Four fragments. Inv. no. 88.158.1.
18. Bowl. Body and base fragments of a large, greyish, thick-walled bowl, decorated with careless channelling in the interior. Two fragments. 7.5 x 5.3 cm; dB. *ca*. 7 cm. Inv. no. 88.159.1.
19. Bowl. Rim and body fragments of a poorly preserved, plain, brownish, funnel-necked bowl. The surface is worn. Five fragments. Inv. no. 88.160.1.
20. Bowl. Rim fragment of a greyish, semi-spherical bowl. The surface is strongly worn. 9 x 4.8 cm. Inv. no. 88.161.1.
21. Amphora. Body fragment of a brownish, ovoid amphora, decorated with a pair of finger-impressed cordons around the shoulder and a small knob underneath. Two fragments. 11.5 x 5.8 cm, 4.5 x 3.5 cm. Inv. no. 88.162.1.
22. Bowl. Rim and body fragments of a greyish, thick-walled, funnel-necked bowl, decorated with a row of stabs around the shoulder and wide vertical channelling on the rim interior. The surface is strongly worn. Two fragments. 5.7 x 5.1 cm, 6.5 x 4.2 cm. Inv. no. 88.163.1.
23. Bowl. Rim fragments of a large, brownish, thick-walled, funnel-necked bowl. The surface is worn. Two fragments. 4.5 x 5.3 cm, 5.6 x 5 cm. Inv. no. 88.164.1.
24. Bowl. Rim and body fragments of a large, plain, brownish, funnel-necked bowl. The surface is strongly worn. Three fragments. Inv. no. 88.165.1.
25. Amphora. Body and base fragments of a brownish, plain, thick-walled amphora. Four fragments. dB. 11 cm. Inv. no. 88.166.1.

26. Bowl. Body and base fragments of a plain, greyish bowl. The surface is strongly worn. Twenty fragments. Inv. no. 88.167.1.
27. Bowl. Large, greyish, funnel-necked, conical bowl, decorated with dense vertical channelling on the rim and faint, vertical channelling on the rim interior. The base is divided into four fields, each filled with oblique channelling. The originally polished plain surface is strongly worn. Refitted and restored. The vessel is erroneously inscribed as being vessel 5 from Grave 458. dB. 10 cm. Inv. no. 88.168.1 *(Pl. 52. 5)*.
28. Bowl. Greyish, conical bowl with low funnel neck. The rim interior is decorated with oblique channelling in alternating directions arranged in a triangle pattern, now barely visible. The base interior bears a design of four triangles filled with oblique hatching touching at the tips. The surface is strongly worn. Refitted and restored. H. 5 cm, dM. 18.5 cm. Inv. no. 88.169.1 *(Pl. 52. 4)*.
29. Bowl. Brownish, semi-spherical bowl, decorated with dense vertical channelling on the rim. The bowl's interior is covered with a channelled pattern, which can no longer be made out. The surface is strongly worn. Refitted. dM. 24.5 cm, H. 6 cm, dB. 6.8 cm. Inv. no. 88.170.1 *(Pl. 52. 8)*.

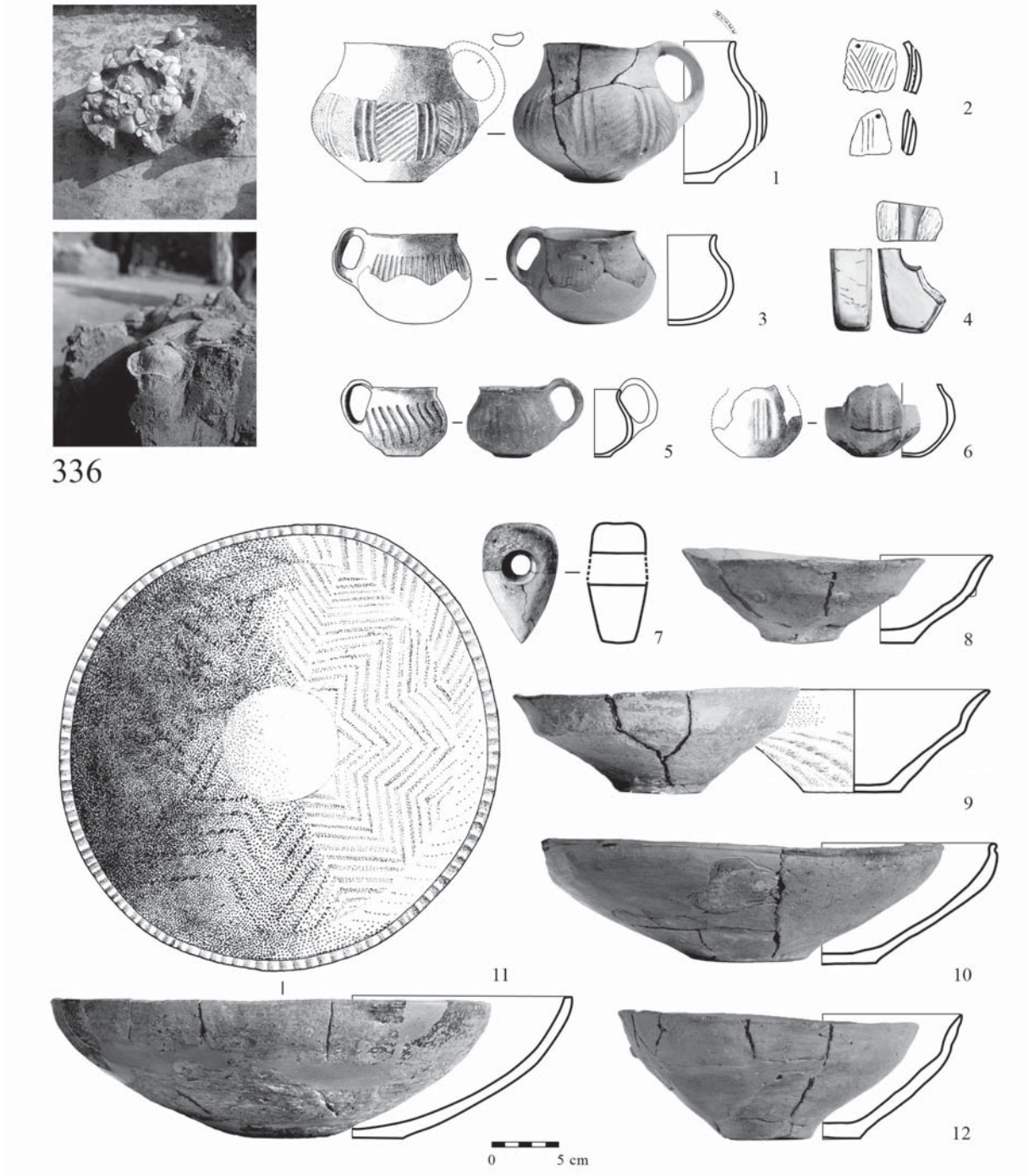


*Plate 1. Pilismarót-Basaharc. Grave 336*

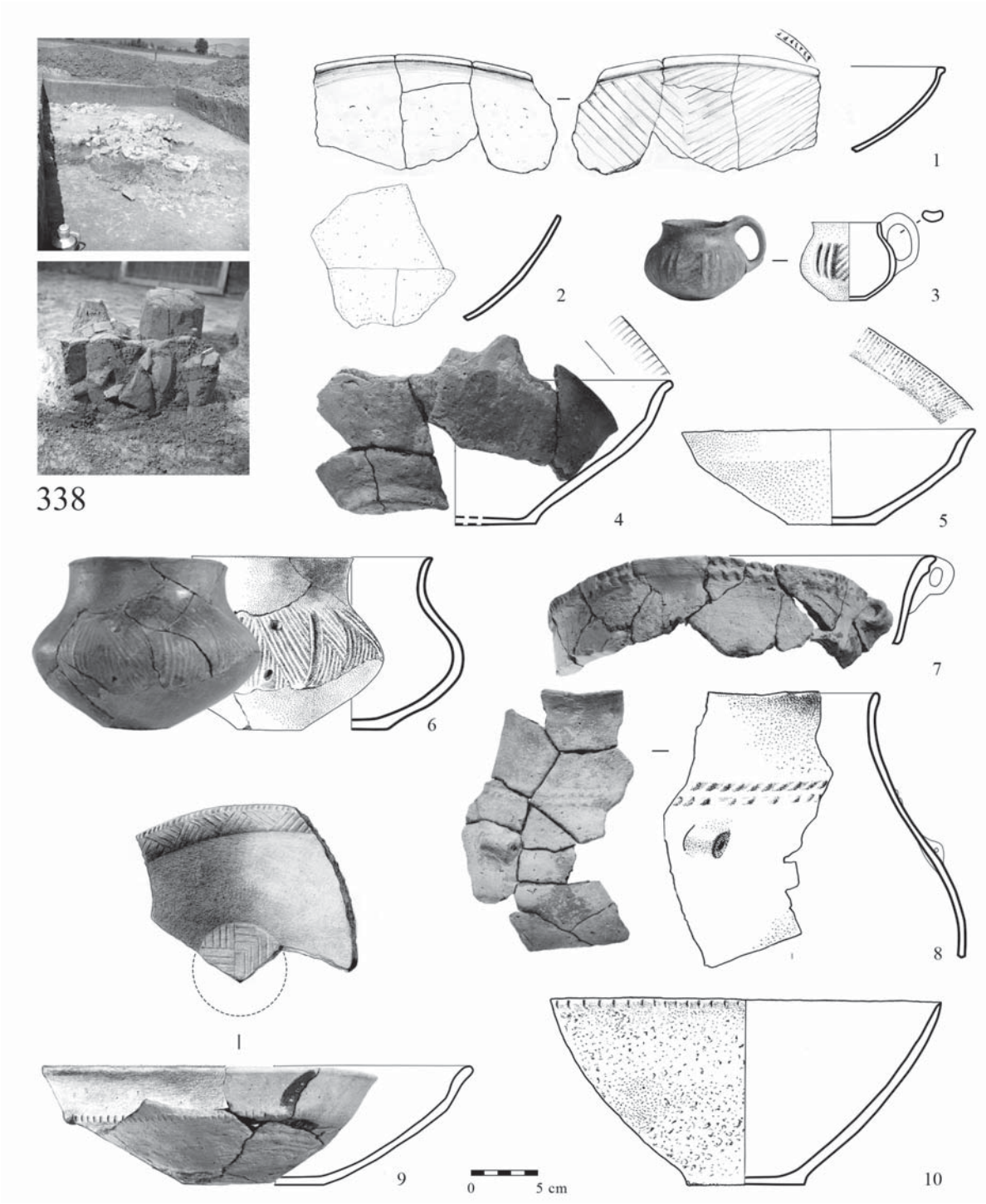


*Plate 2. Pilismarót-Basaharc. Grave 338*

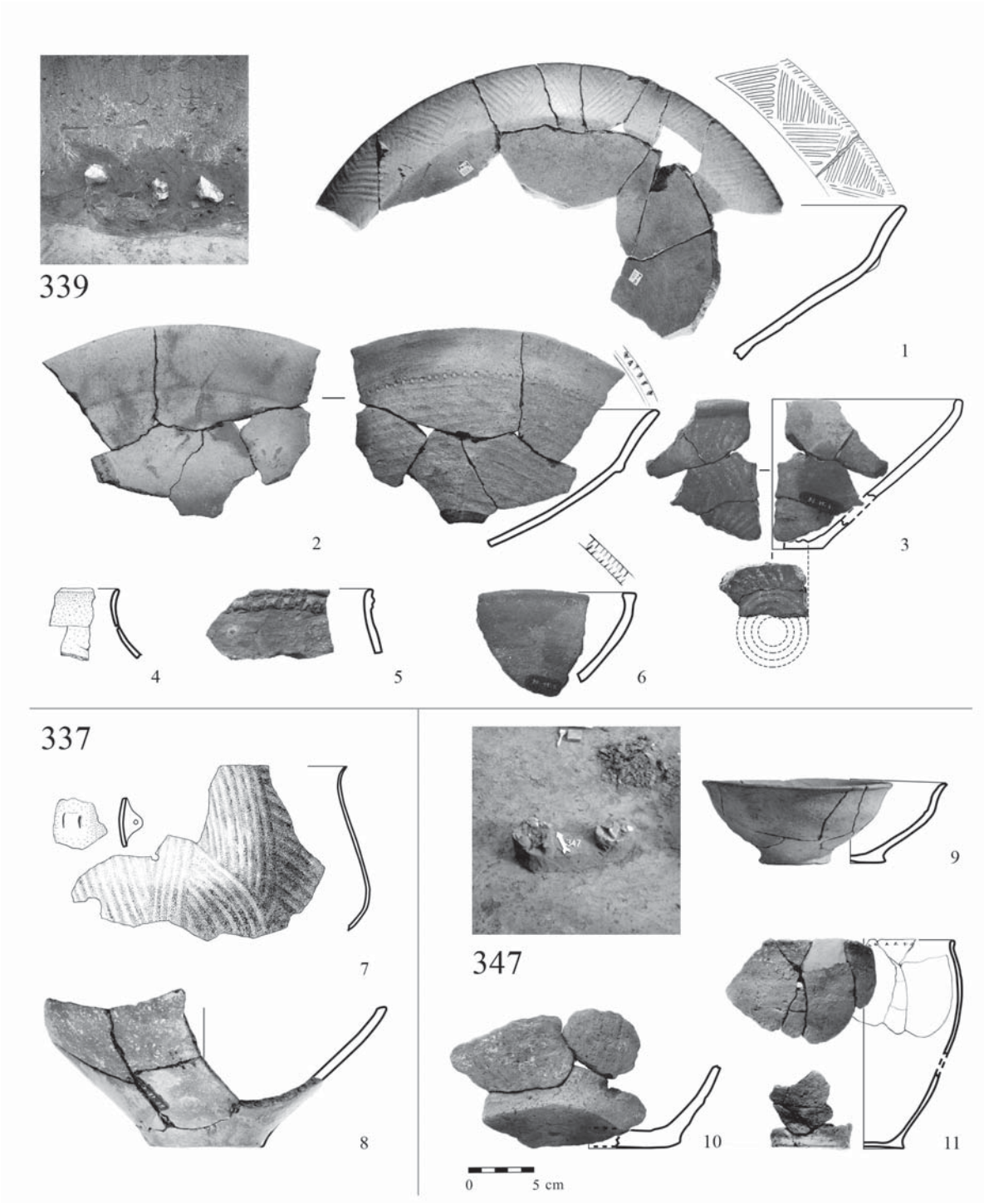


*Plate 3. Pilismarót-Basaharc. Graves 337, 339 and 347*

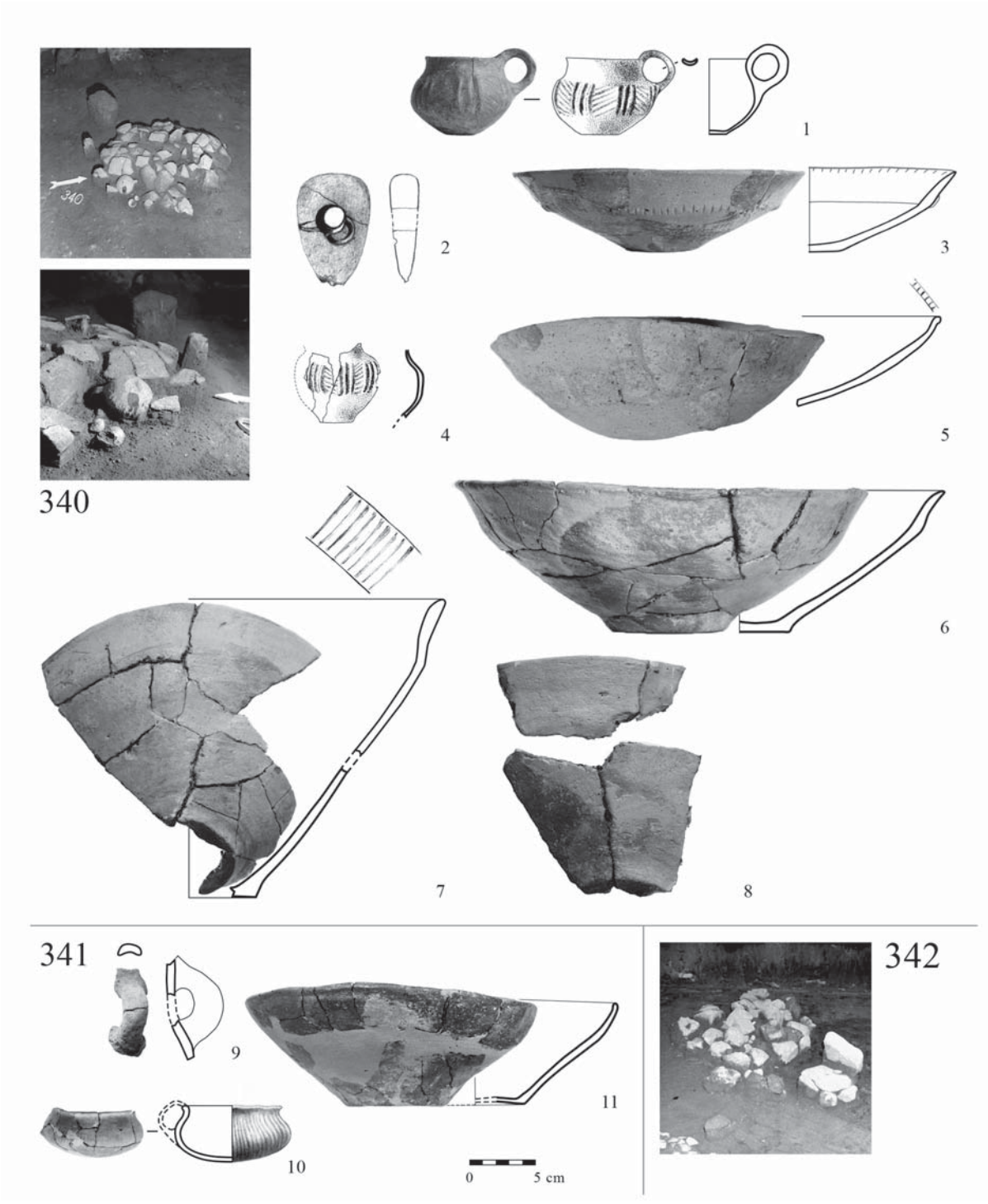


*Plate 4. Pilismarót-Basaharc. Graves 340, 341 and 342*

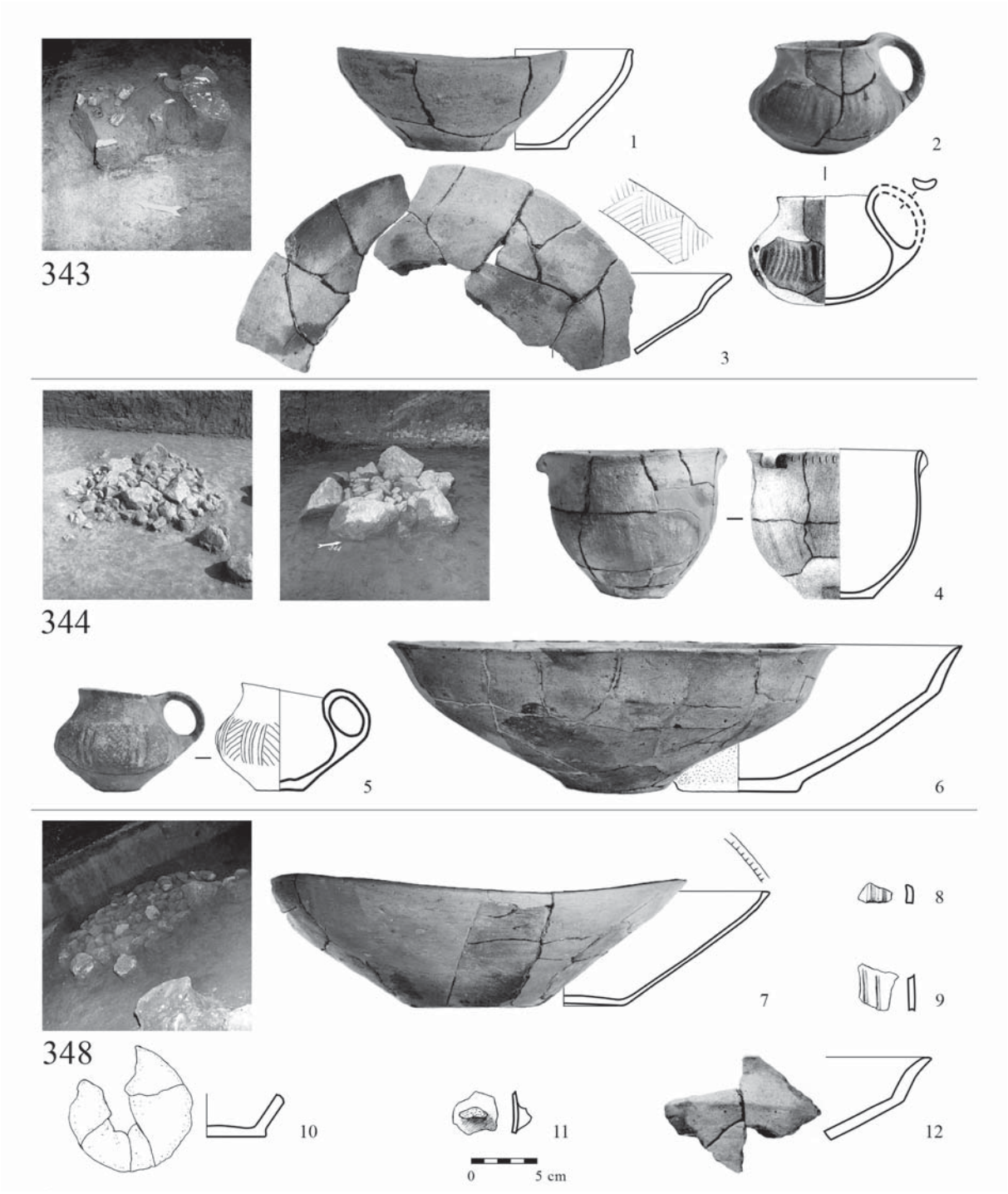


*Plate 5. Pilismarót-Basaharc. Graves 343, 344 and 348*

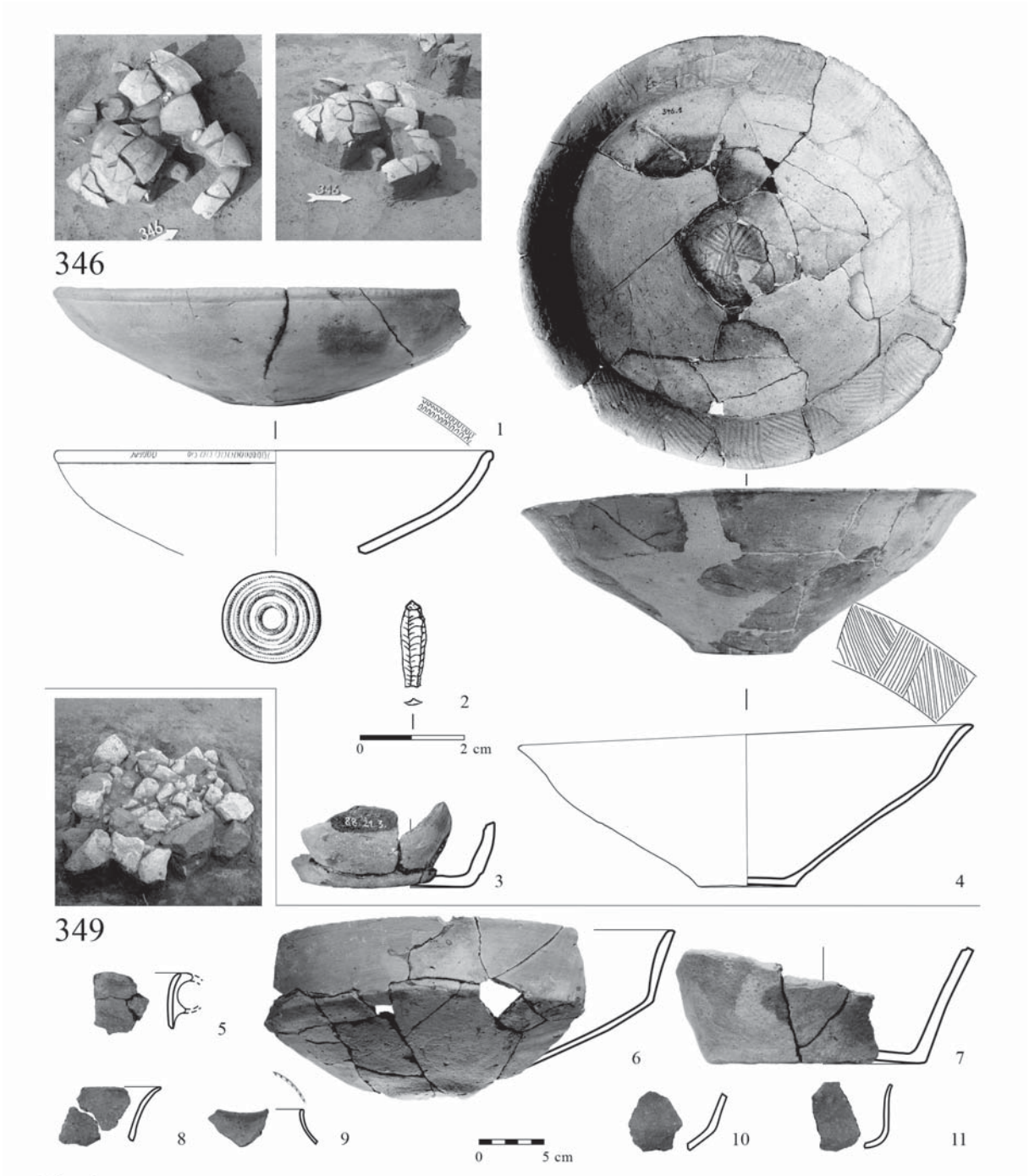


*Plate 6. Pilismarót-Basaharc. Graves 346 and 349*

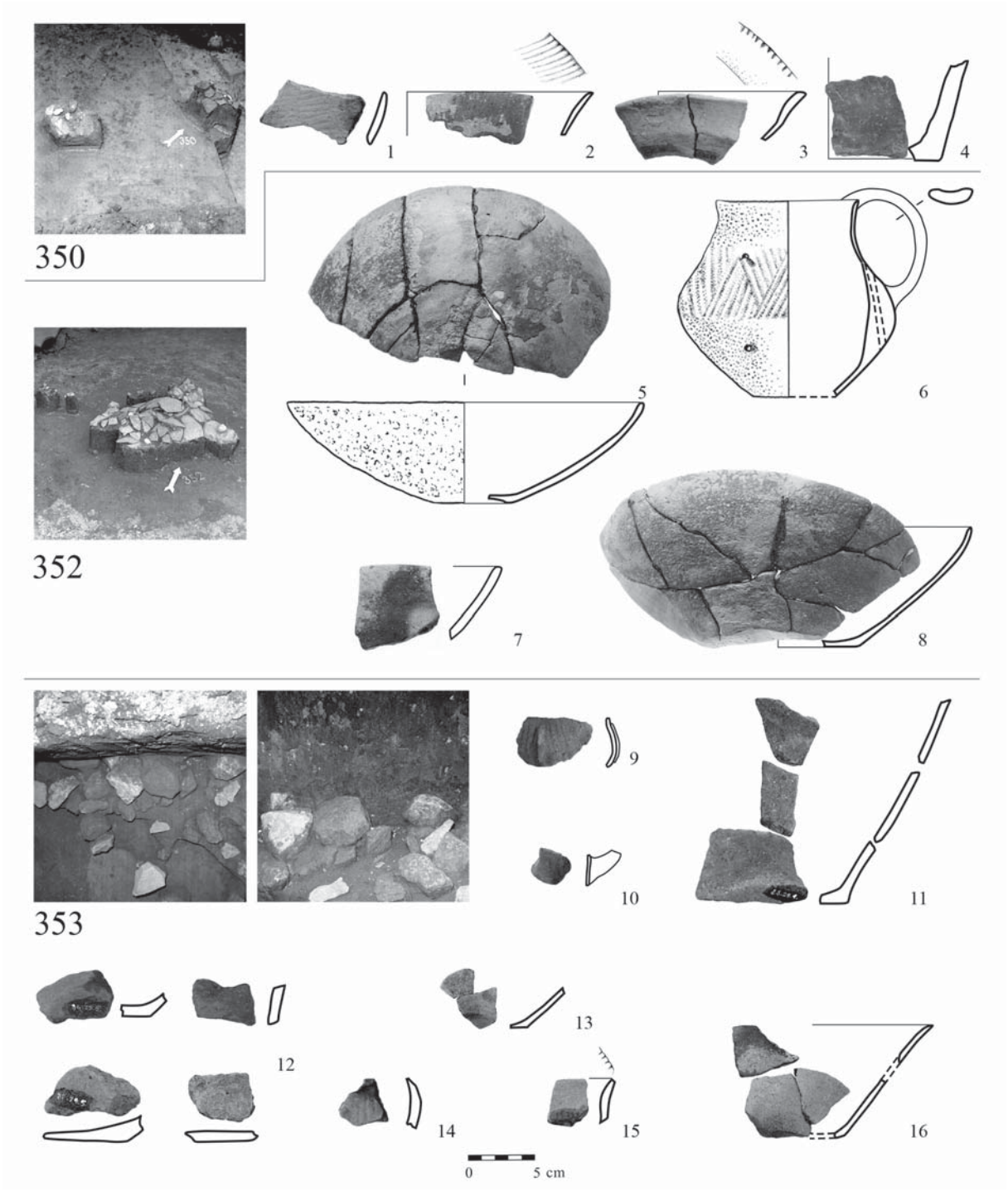


*Plate 7. Pilismarót-Basaharc. Graves 350, 352 and 353*

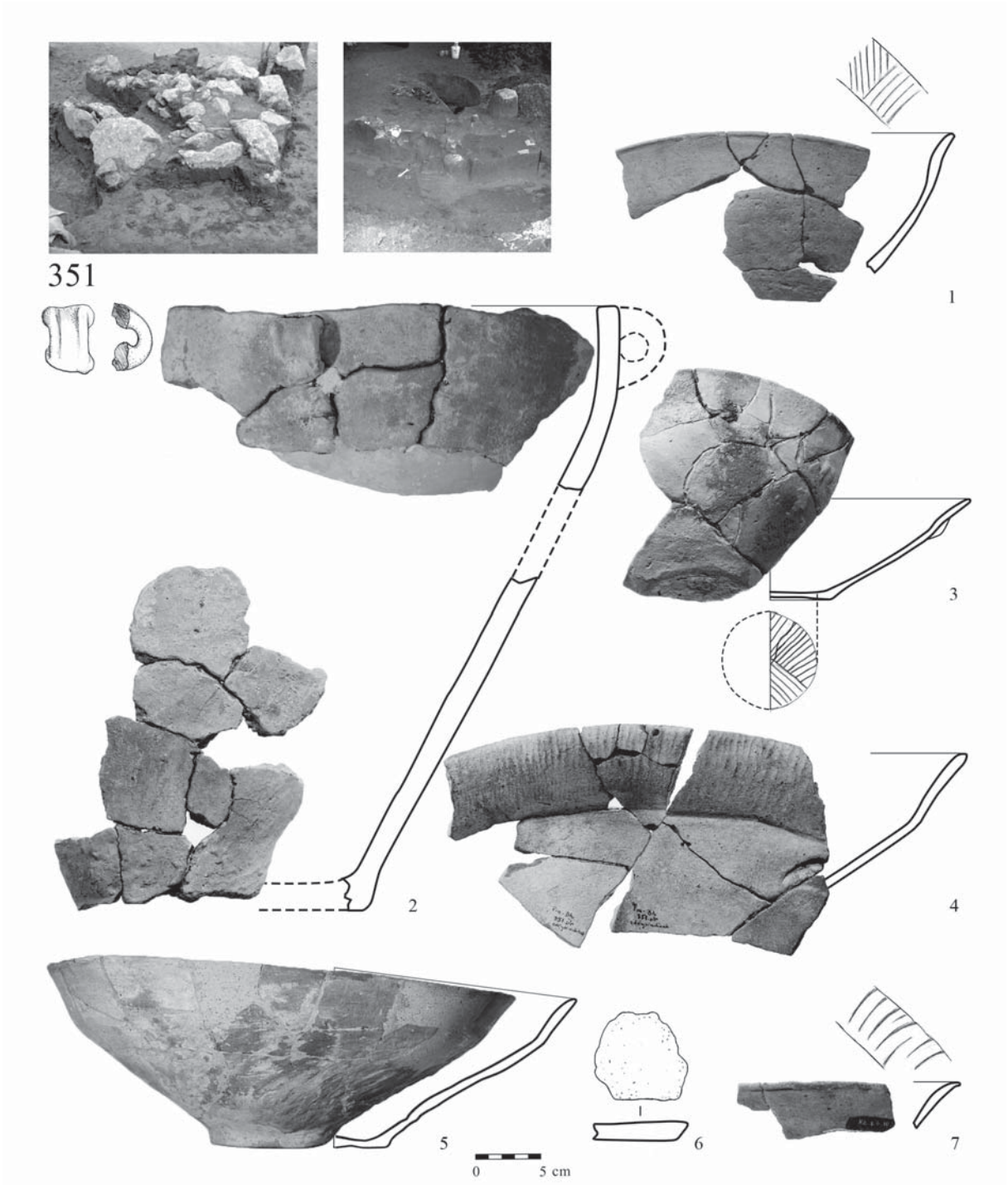


*Plate 8. Pilismarót-Basaharc. Grave 351*

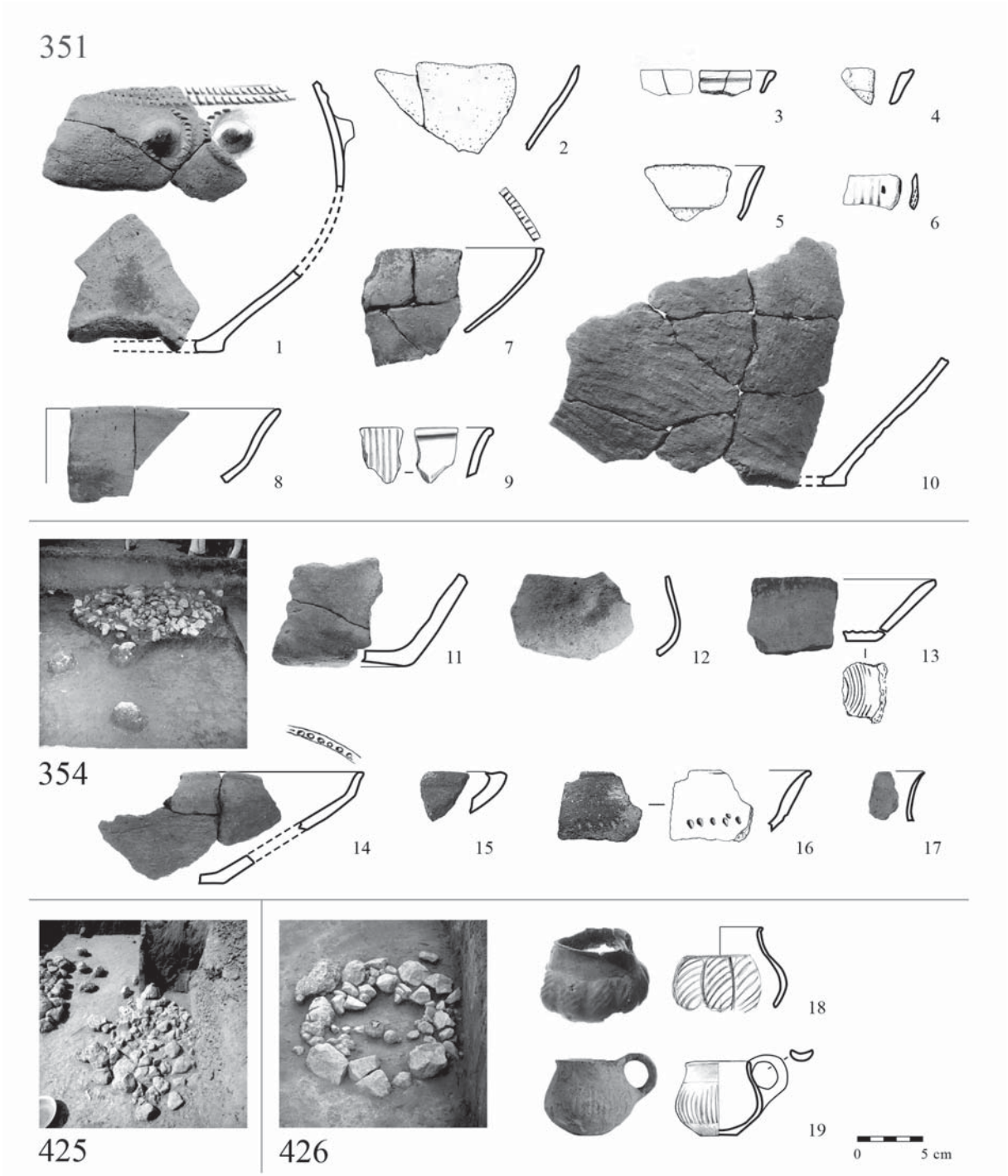


*Plate 9. Pilismarót-Basaharc. Graves 351, 354, 425 and 426*

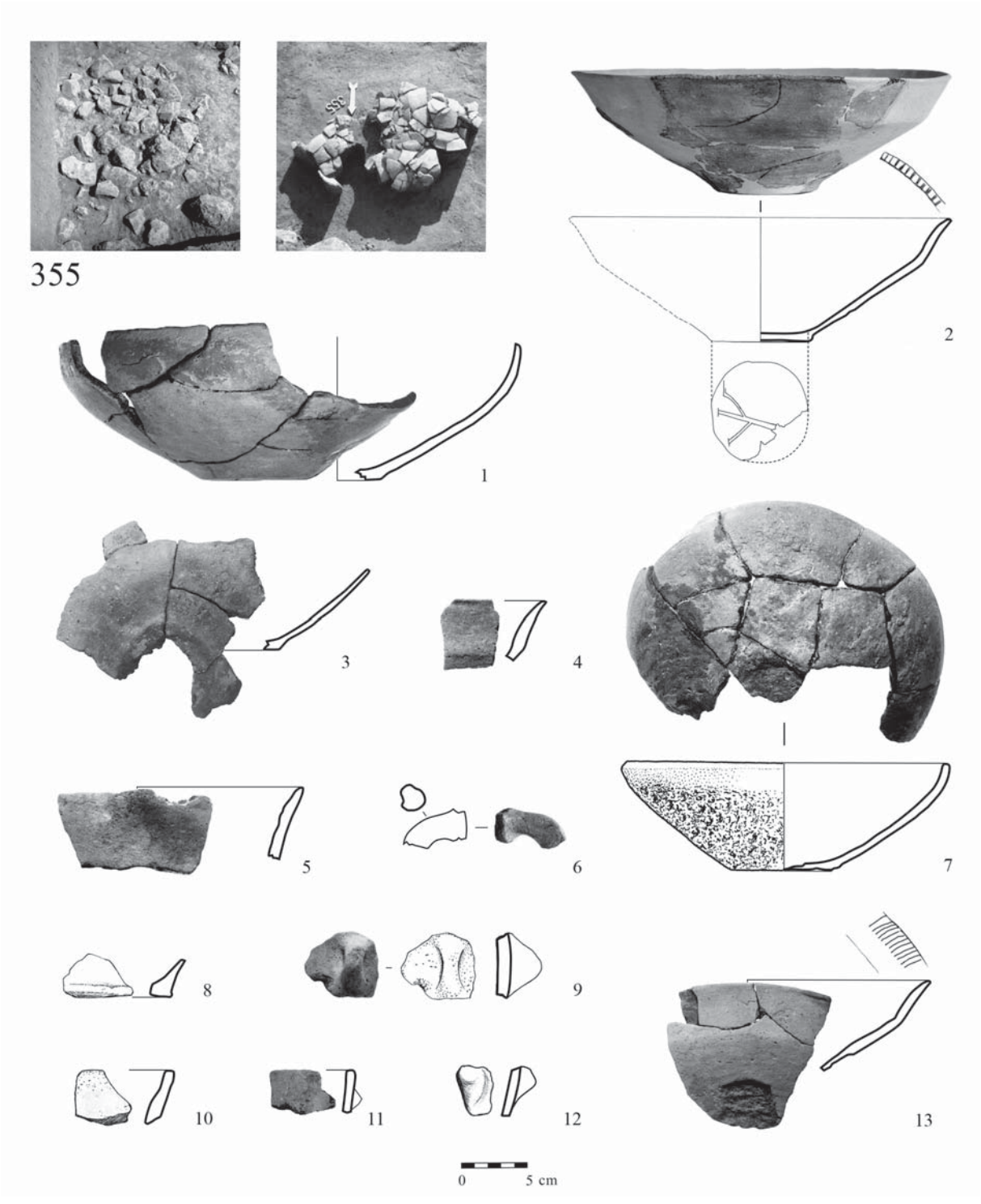


*Plate 10. Pilismarót-Basaharc. Grave 355*

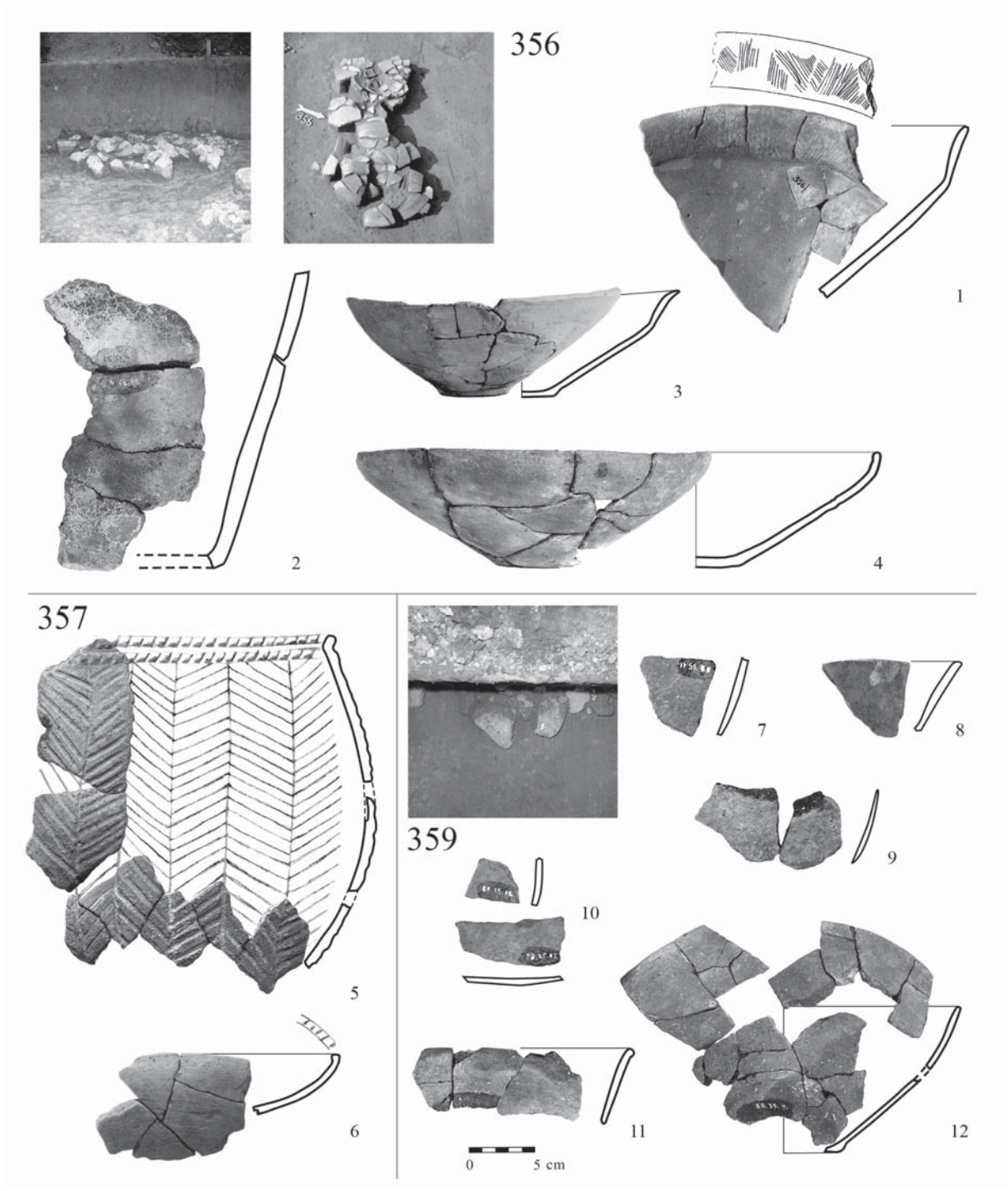


*Plate 11. Pilismarót-Basaharc. Graves 356, 357 and 359*

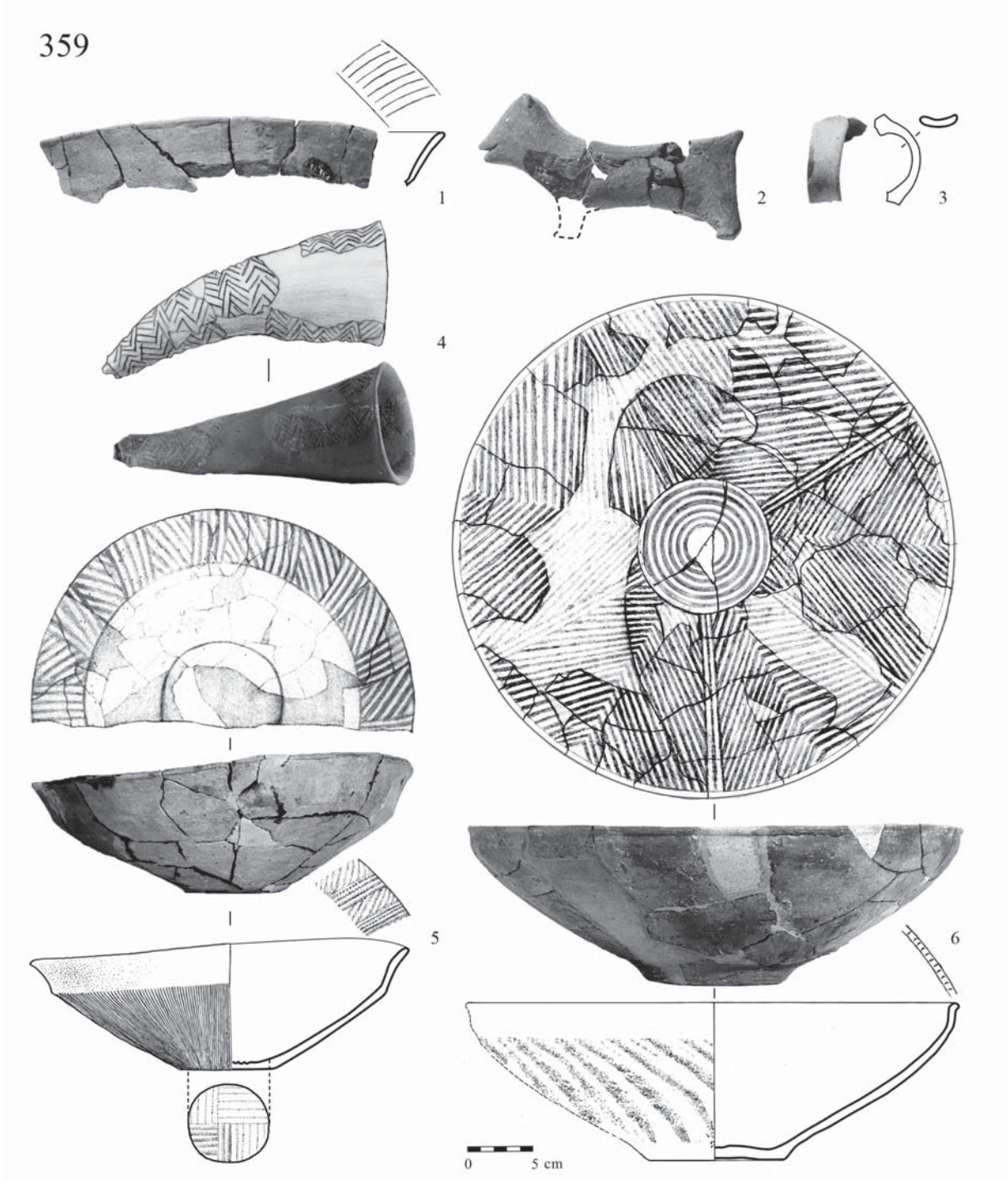


*Plate 12. Pilismarót-Basaharc. Grave 359*

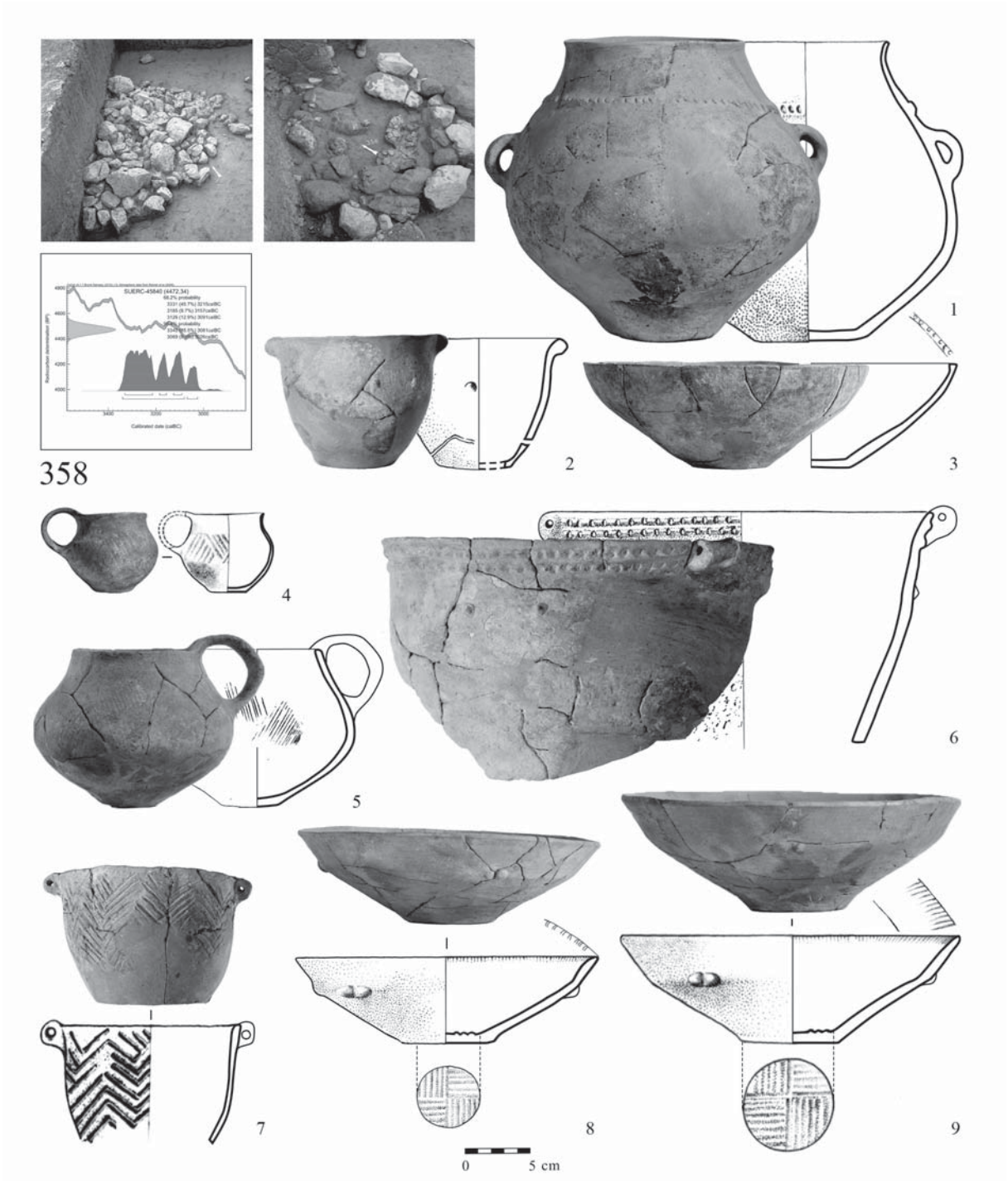


*Plate 13. Pilismarót-Basaharc. Grave 358*

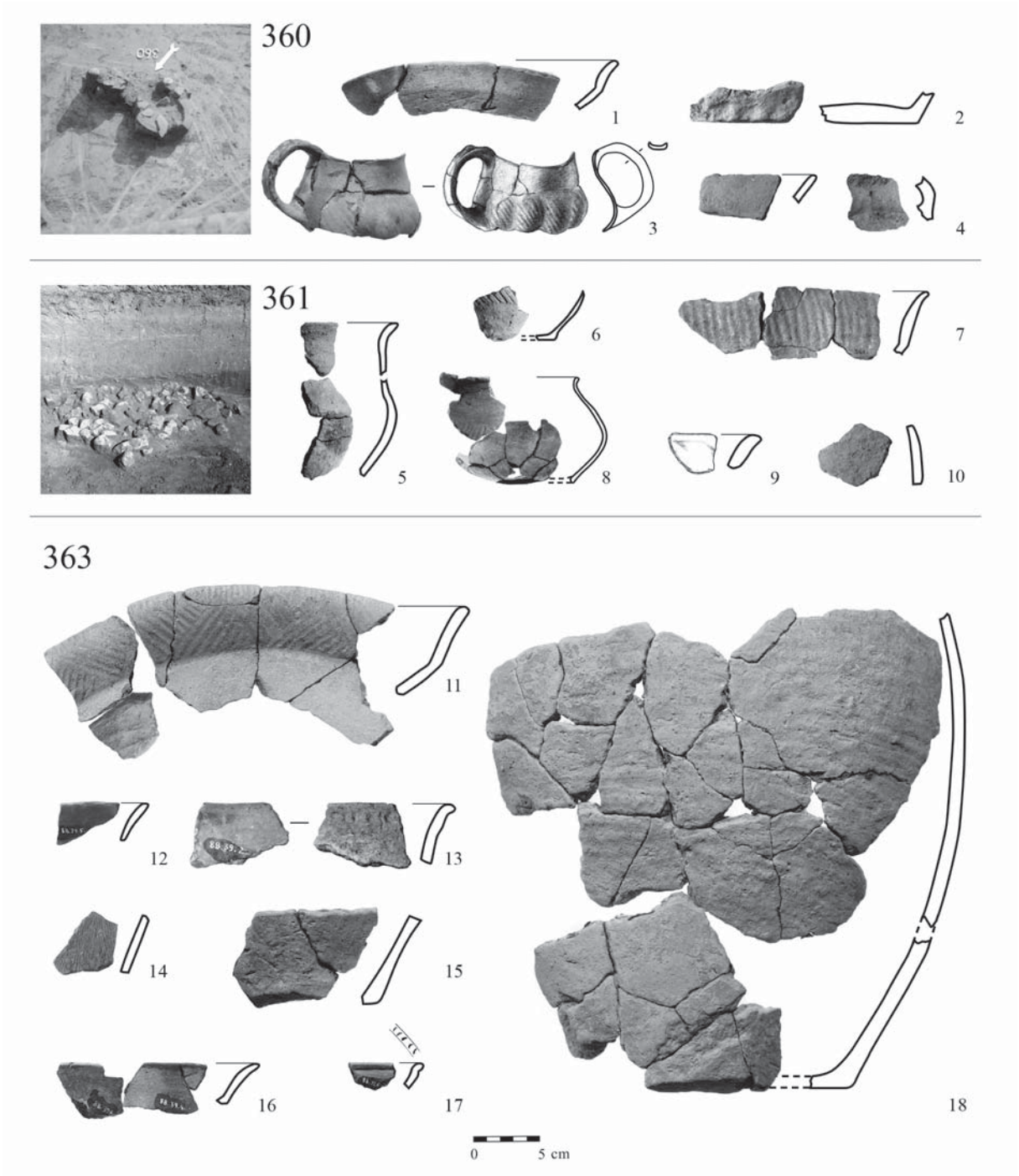


*Plate 14. Pilismarót-Basaharc. Graves 360, 361 and 363*

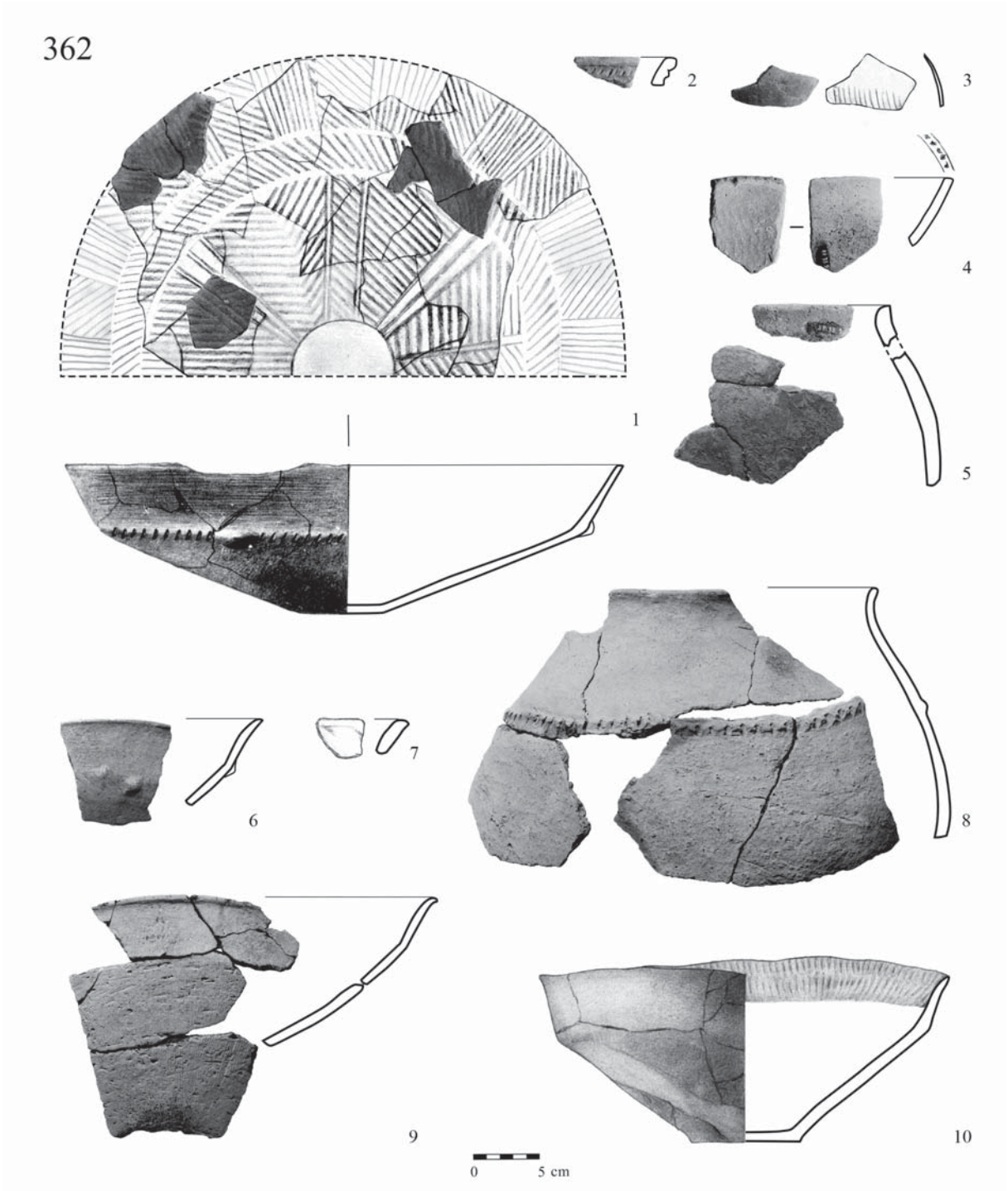


*Plate 15. Pilismarót-Basaharc. Grave 362*

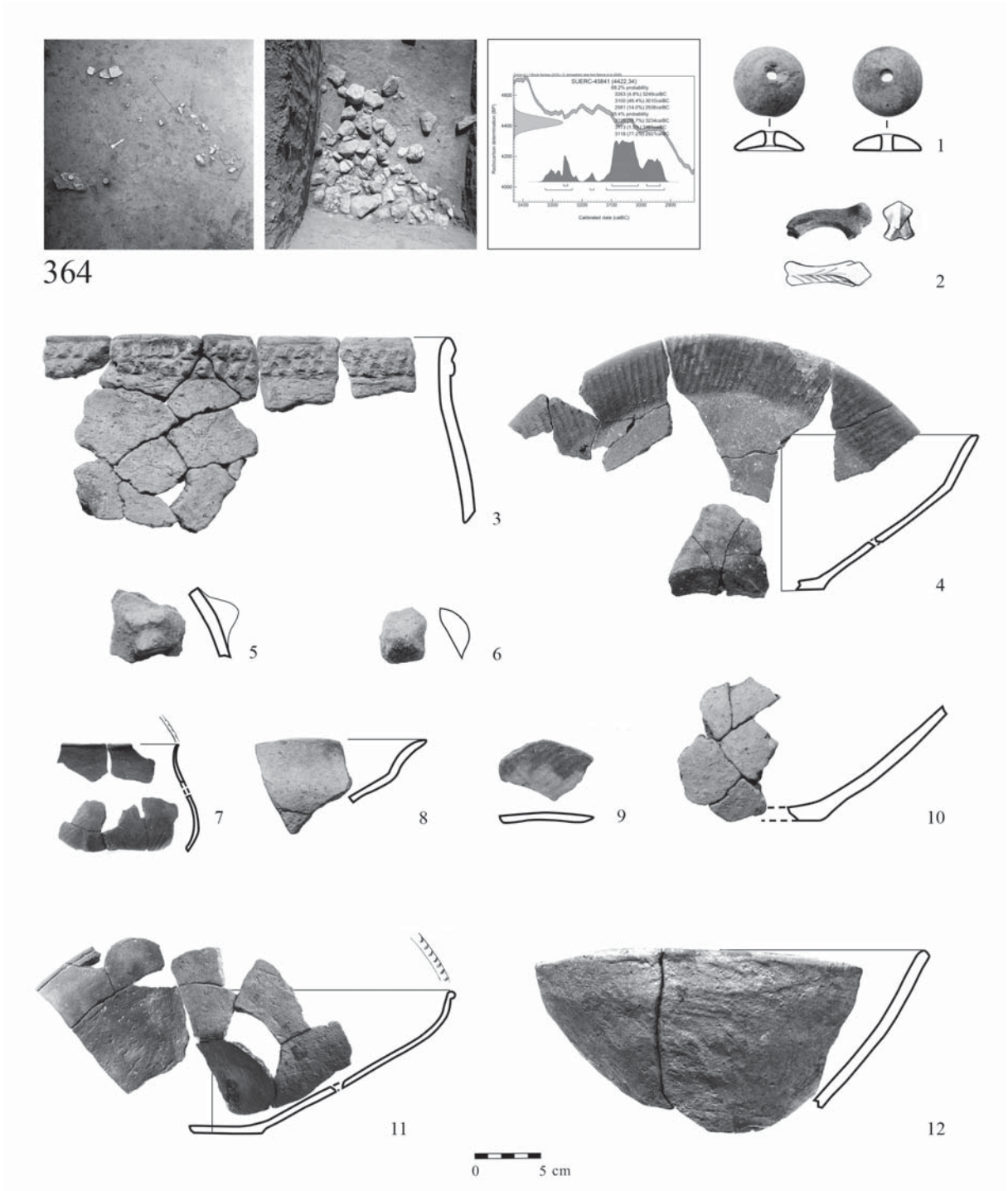


*Plate 16. Pilismarót-Basaharc. Grave 364*

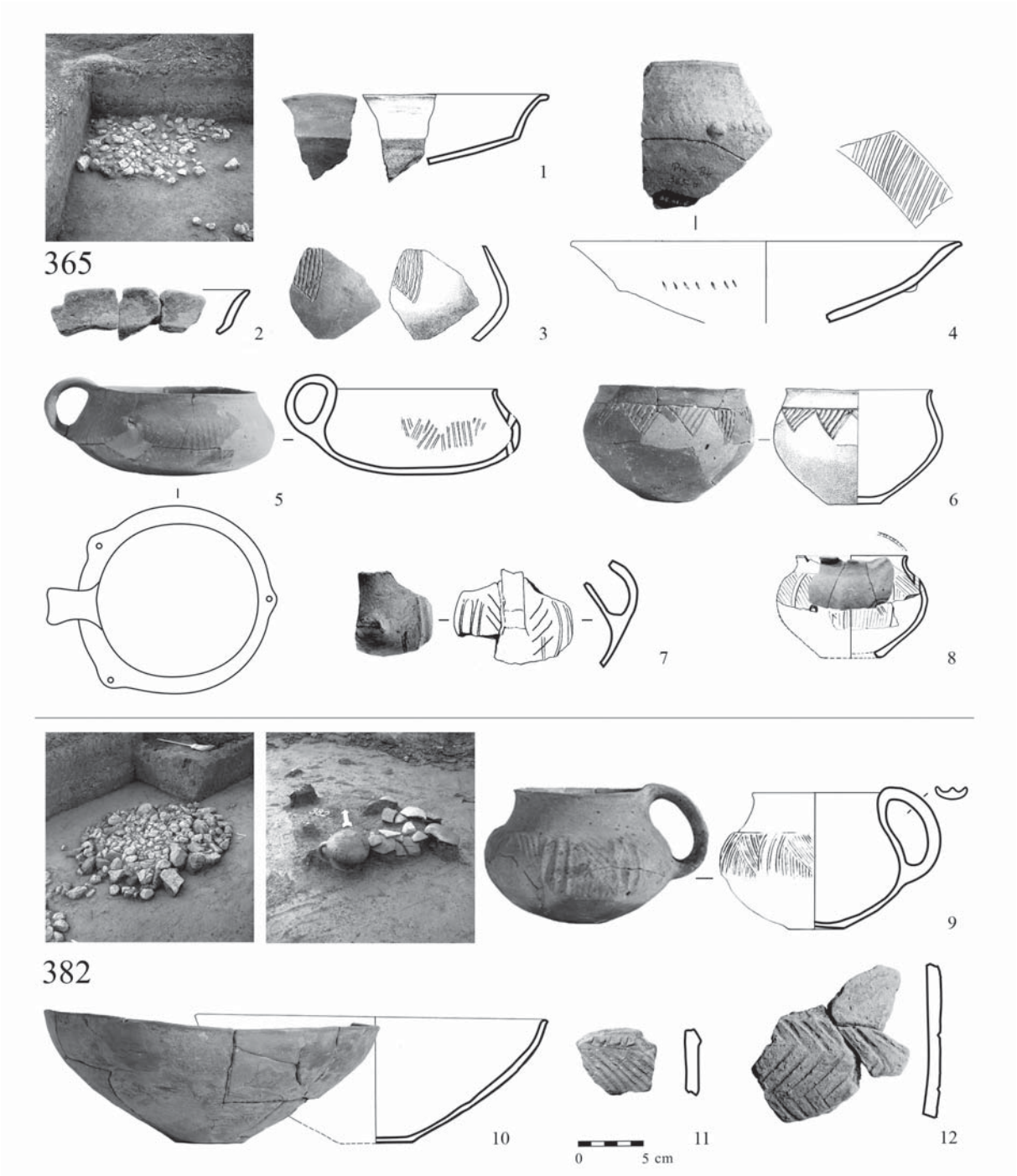


*Plate 17. Pilismarót-Basaharc. Graves 365 and 382*

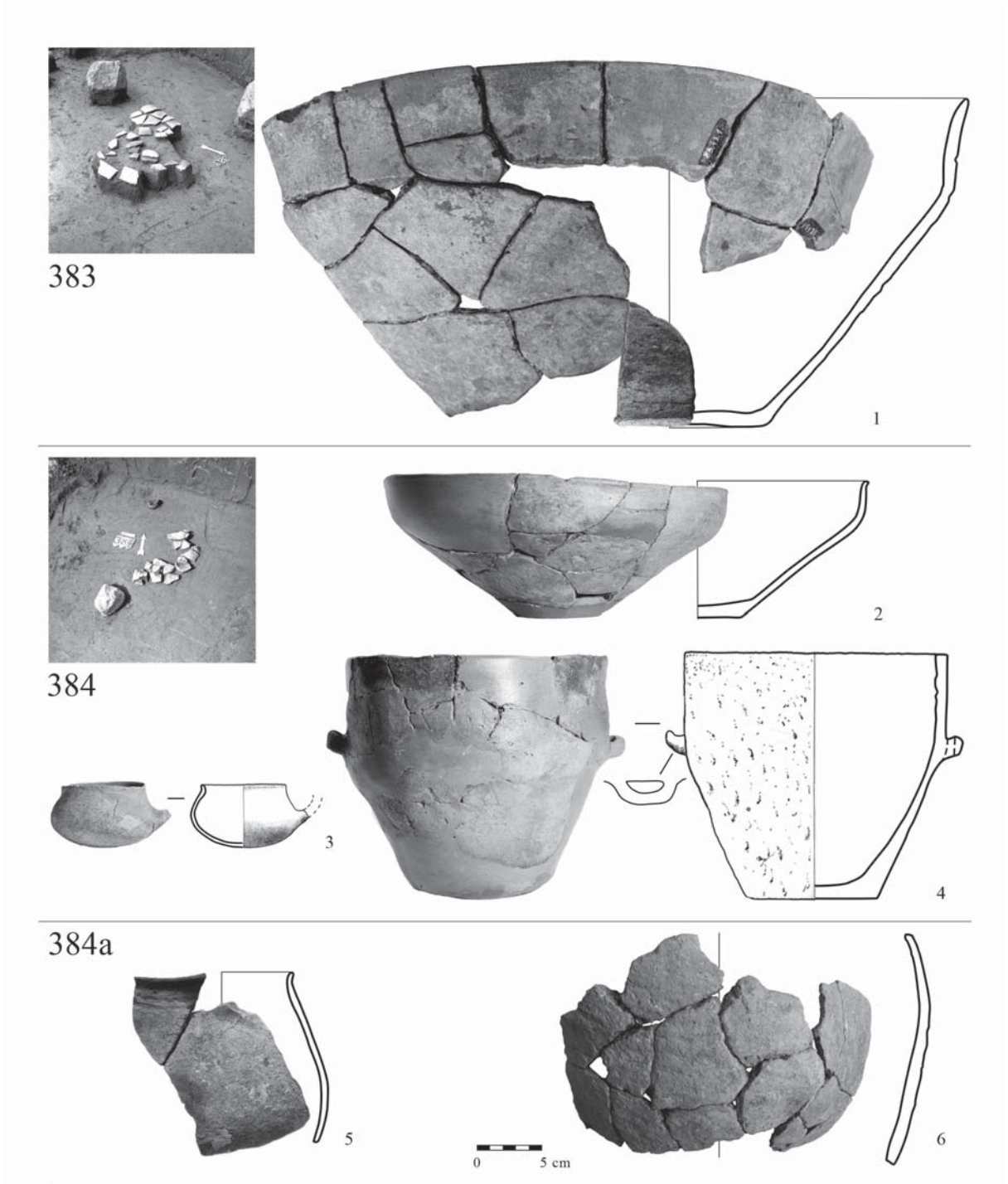


*Plate 18. Pilismarót-Basaharc. Graves 383, 384 and 384a*

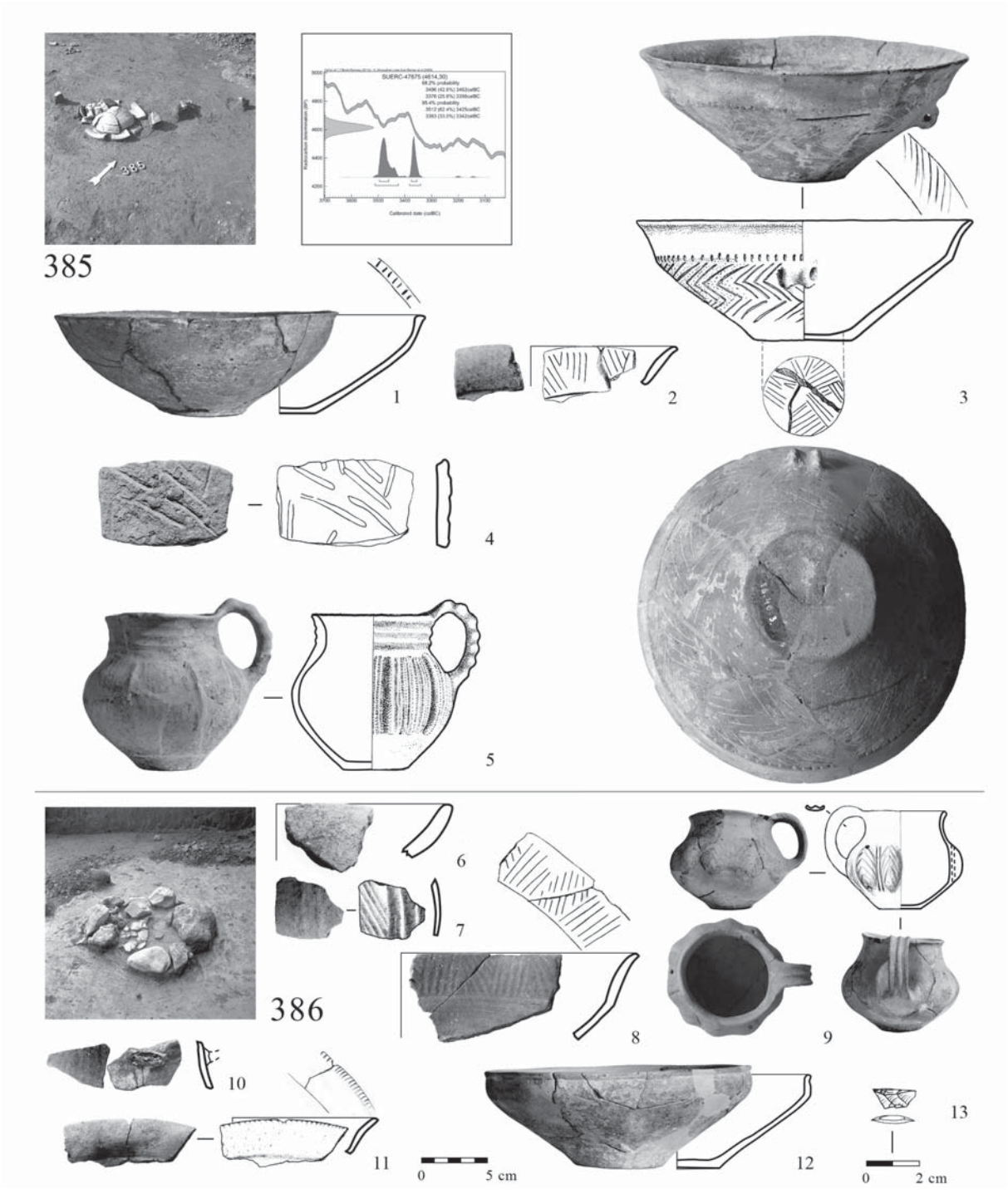


*Plate 19. Pilismarót-Basaharc. Graves 385 and 386*

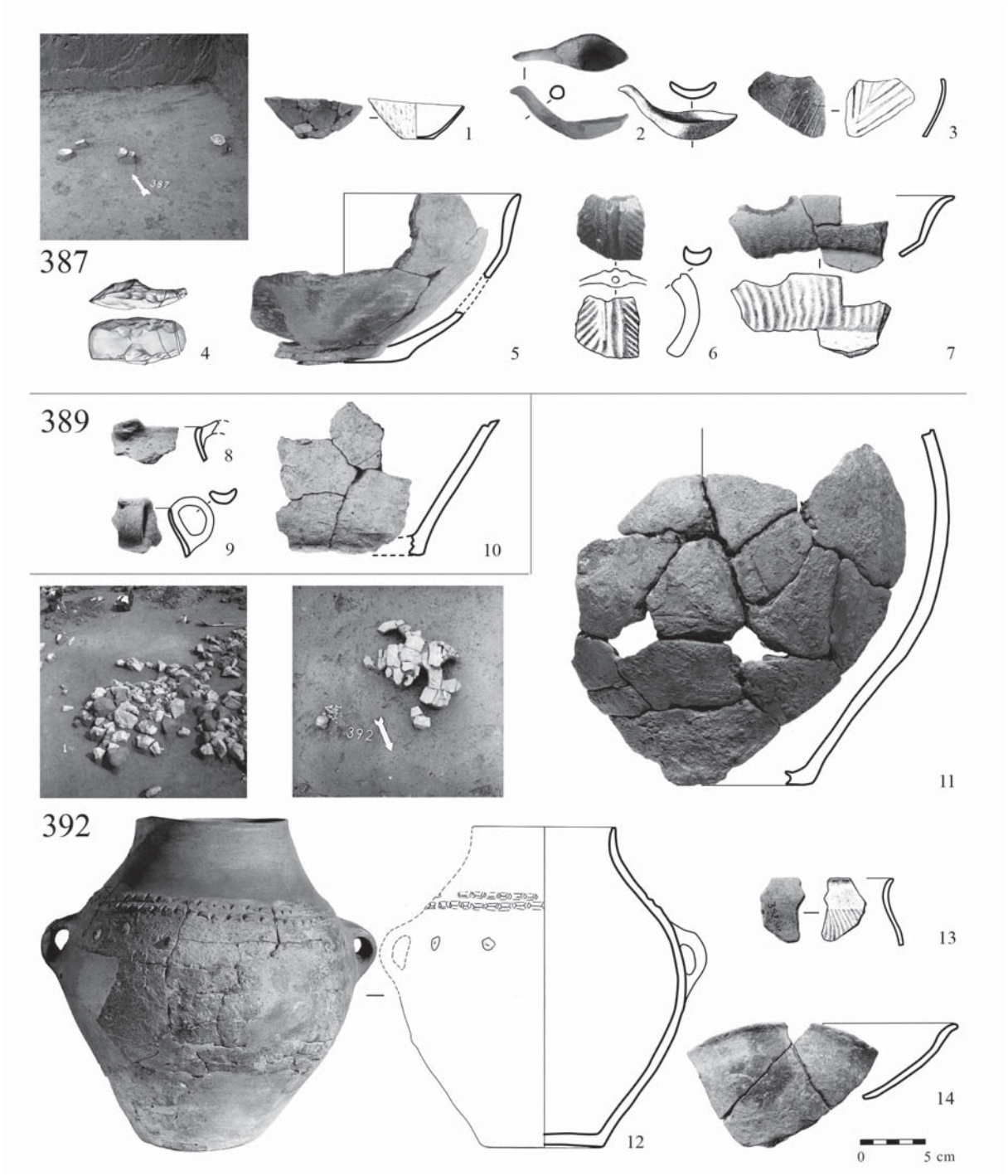


*Plate 20. Pilismarót-Basaharc. Graves 387, 389 and 392*

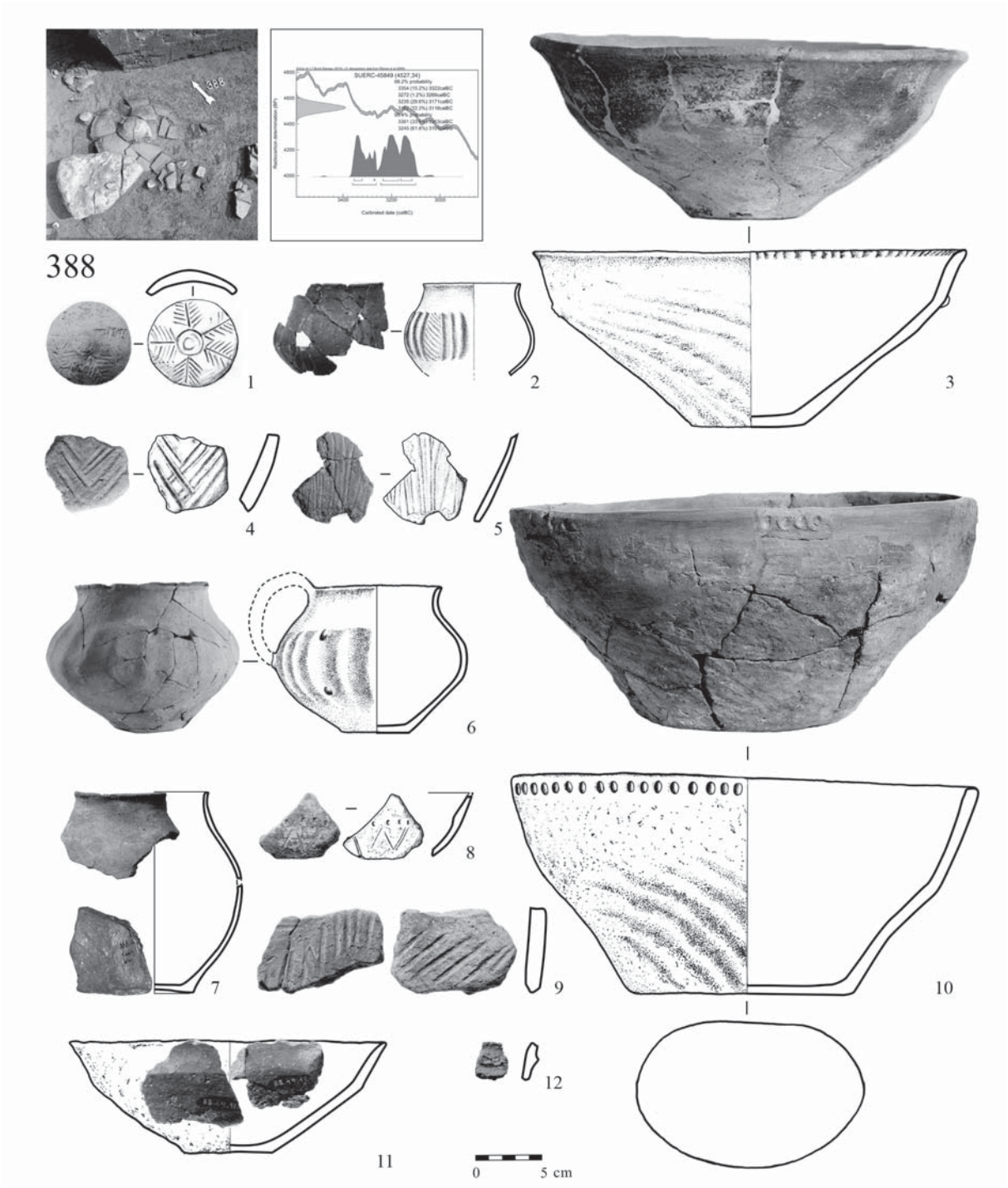


*Plate 21. Pilismarót-Basaharc. Grave 388*

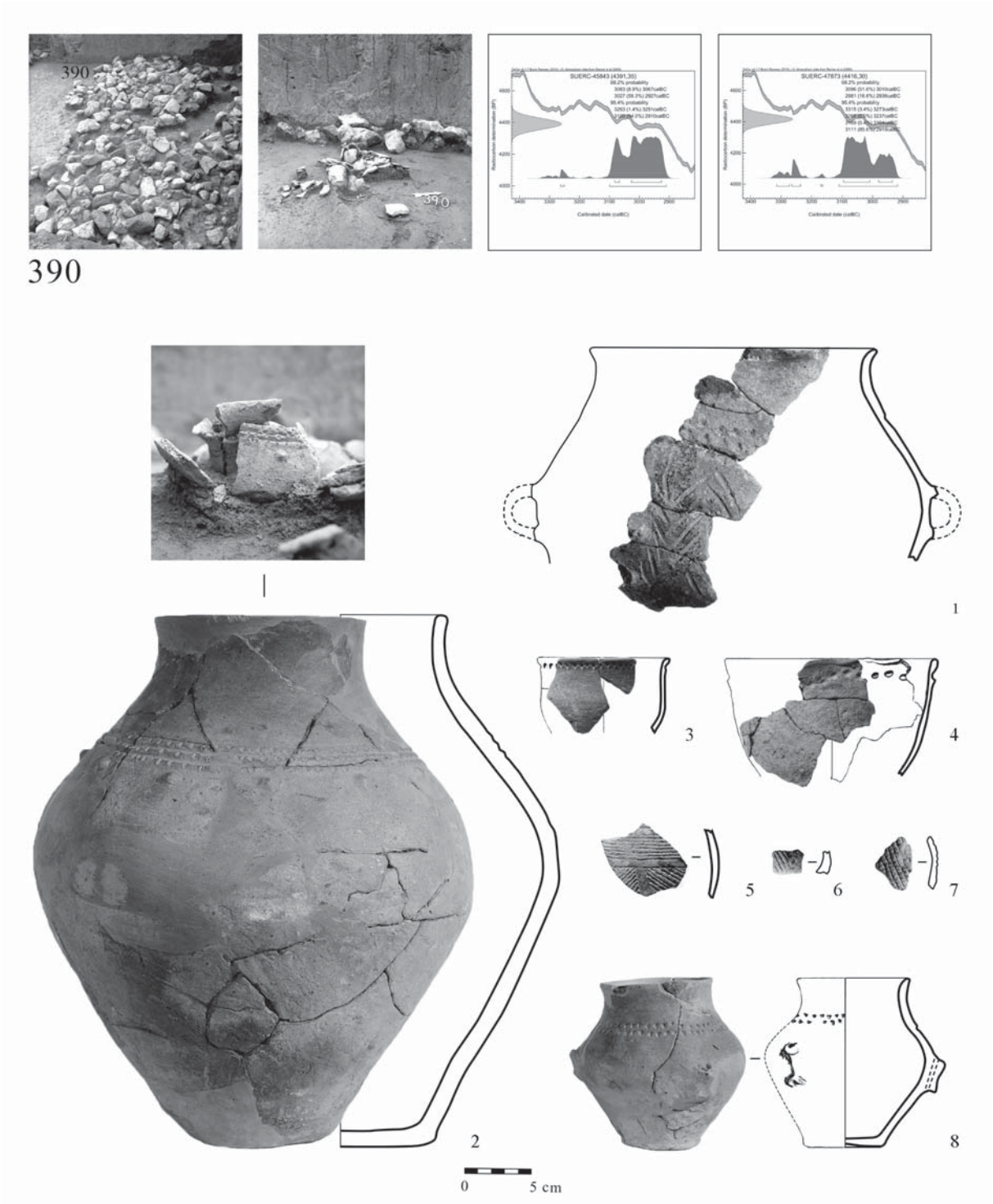


*Plate 22. Pilismarót-Basaharc. Grave 390*

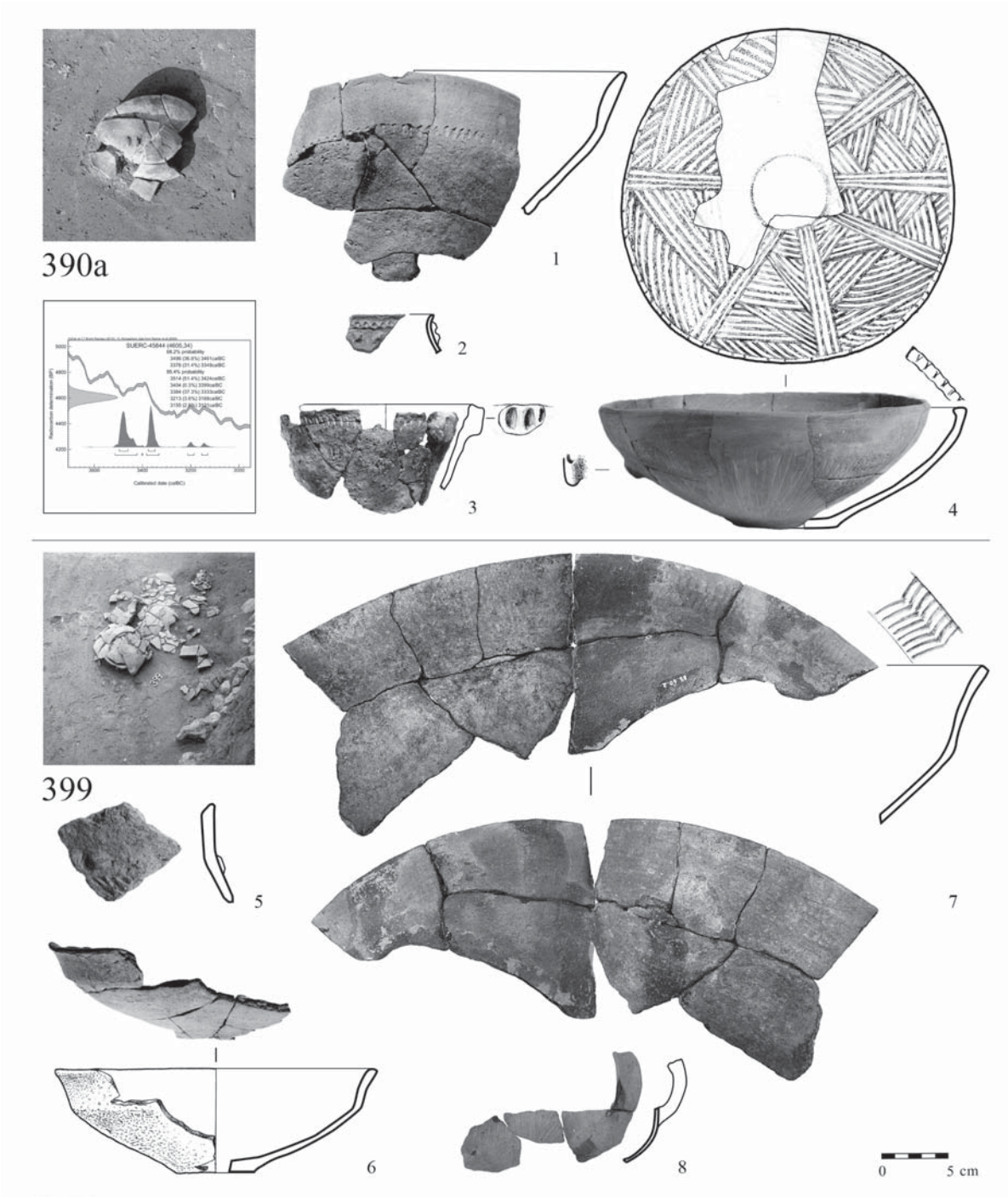


*Plate 23. Pilismarót-Basaharc. Graves 390a and 399*

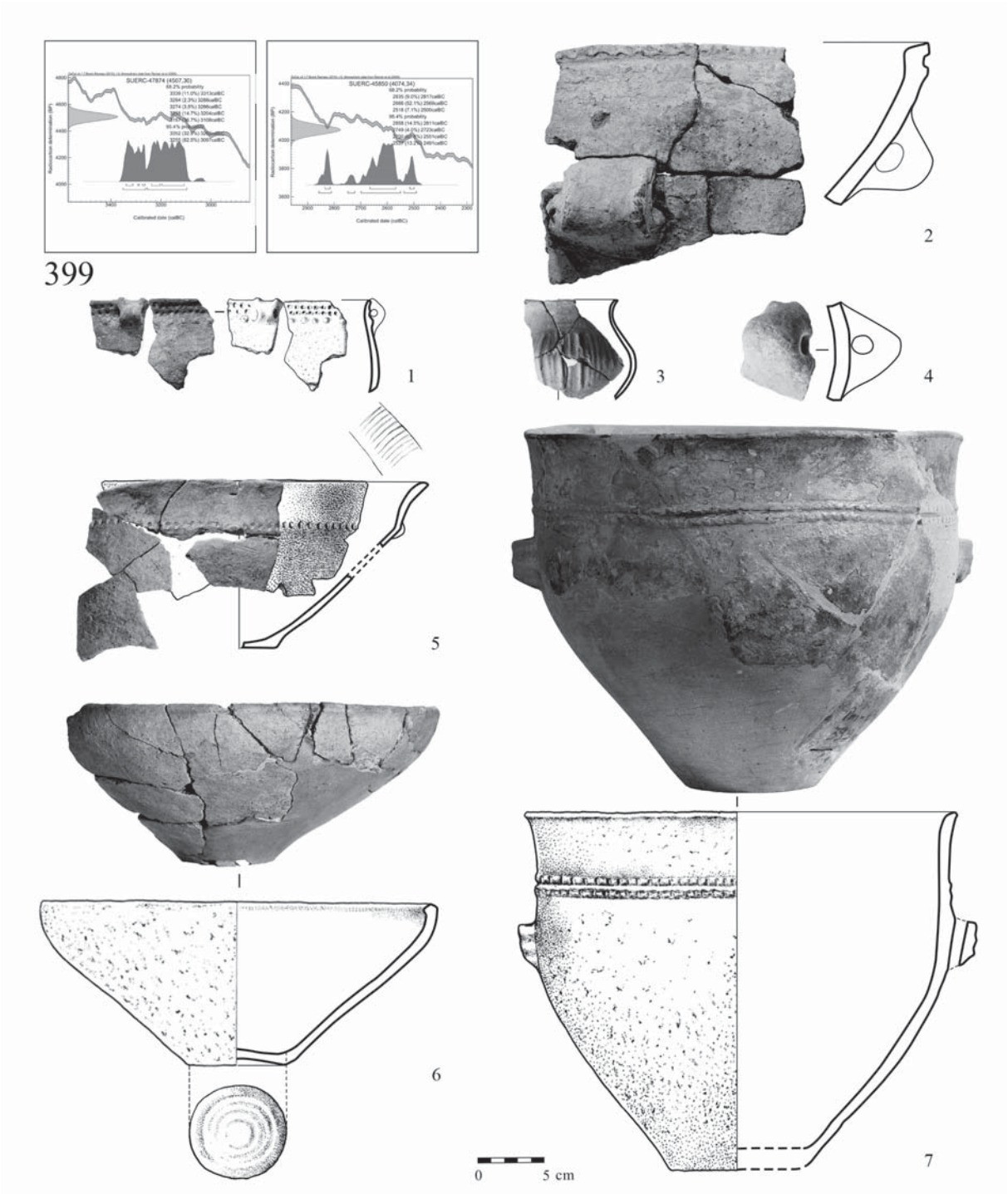


*Plate 24. Pilismarót-Basaharc. Grave 399*

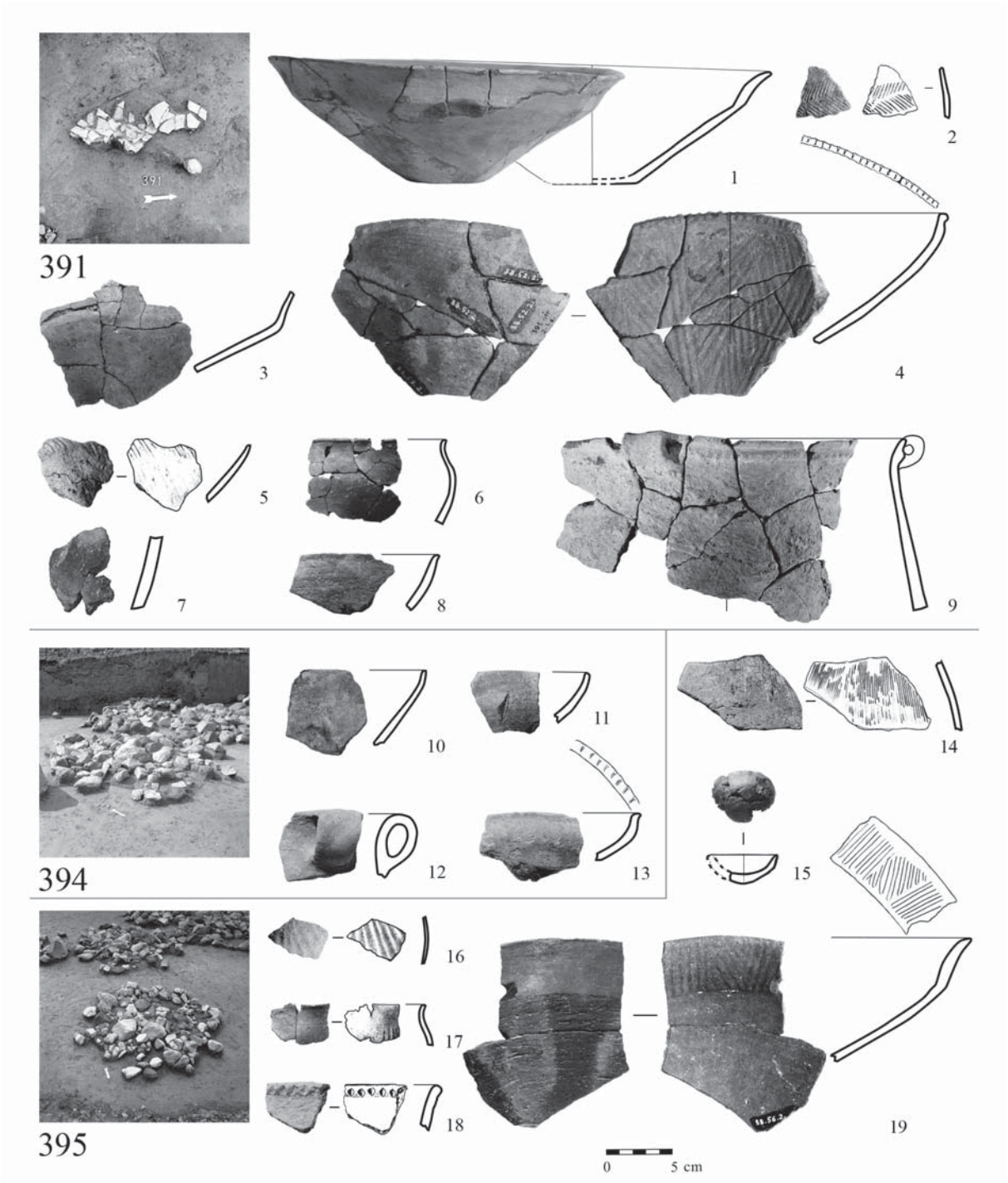


*Plate 25. Pilismarót-Basaharc. Graves 391, 394 and 395*

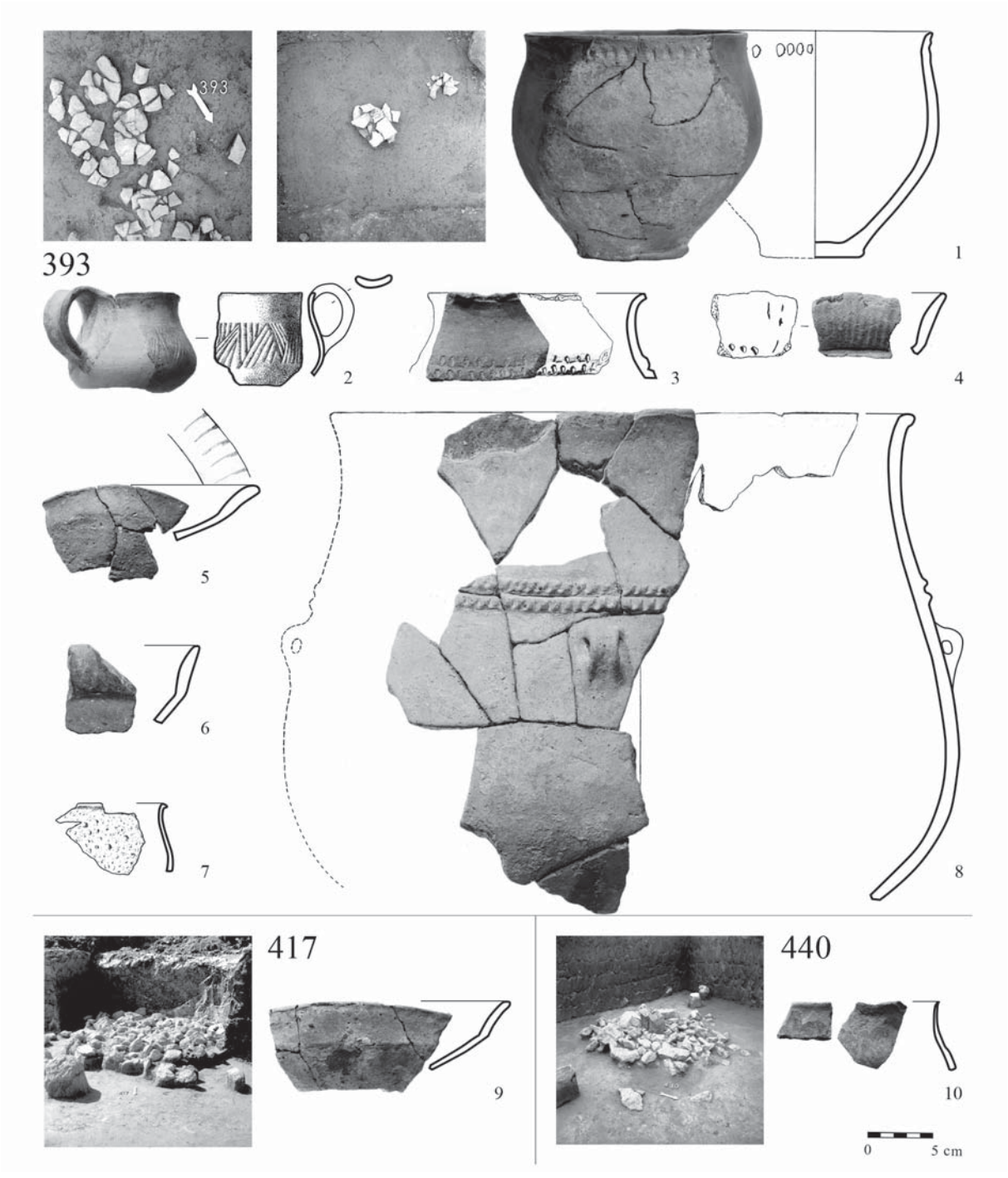


*Plate 26. Pilismarót-Basaharc. Graves 393, 417 and 440*

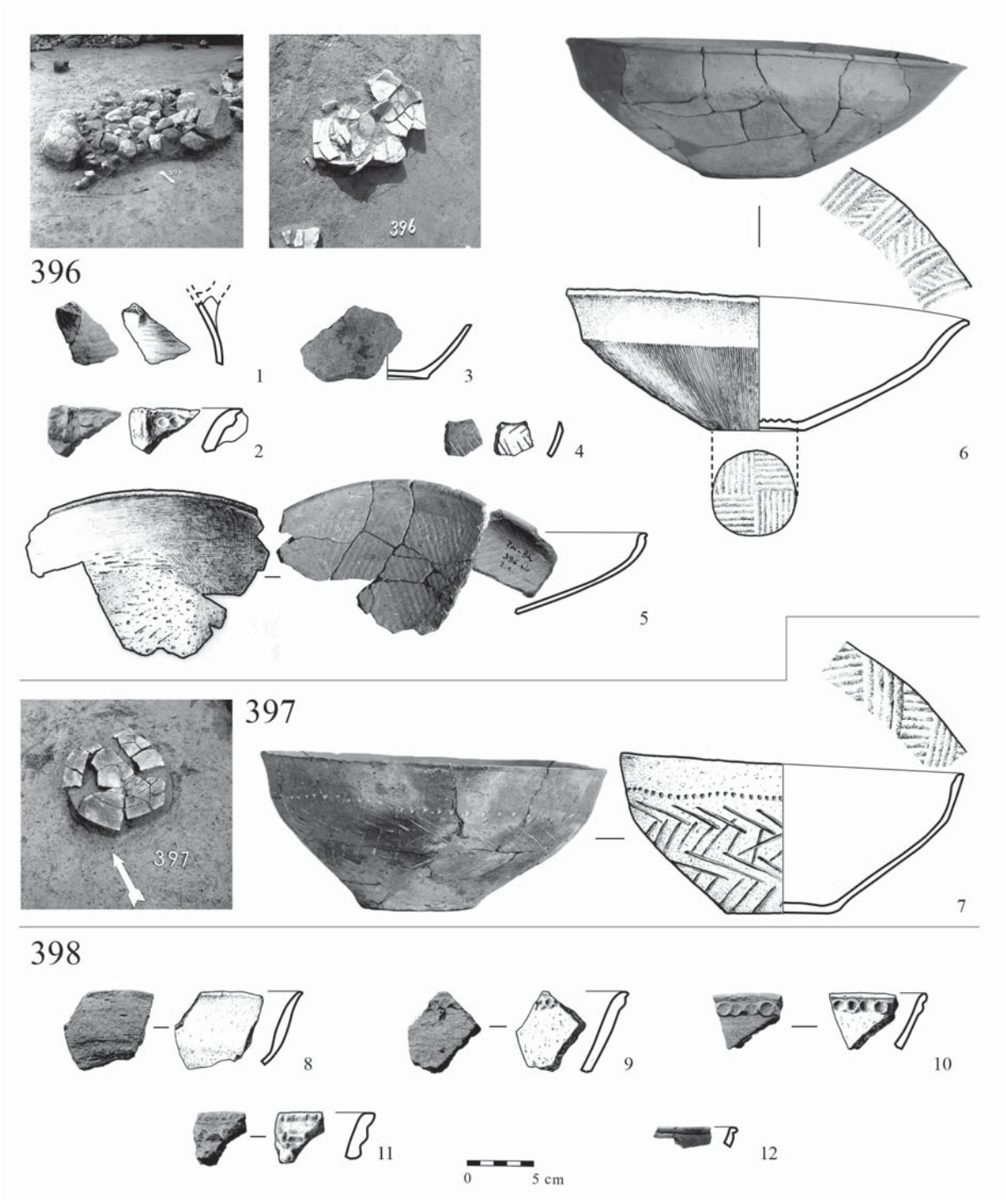


*Plate 27. Pilismarót-Basaharc. Graves 396, 397 and 398*

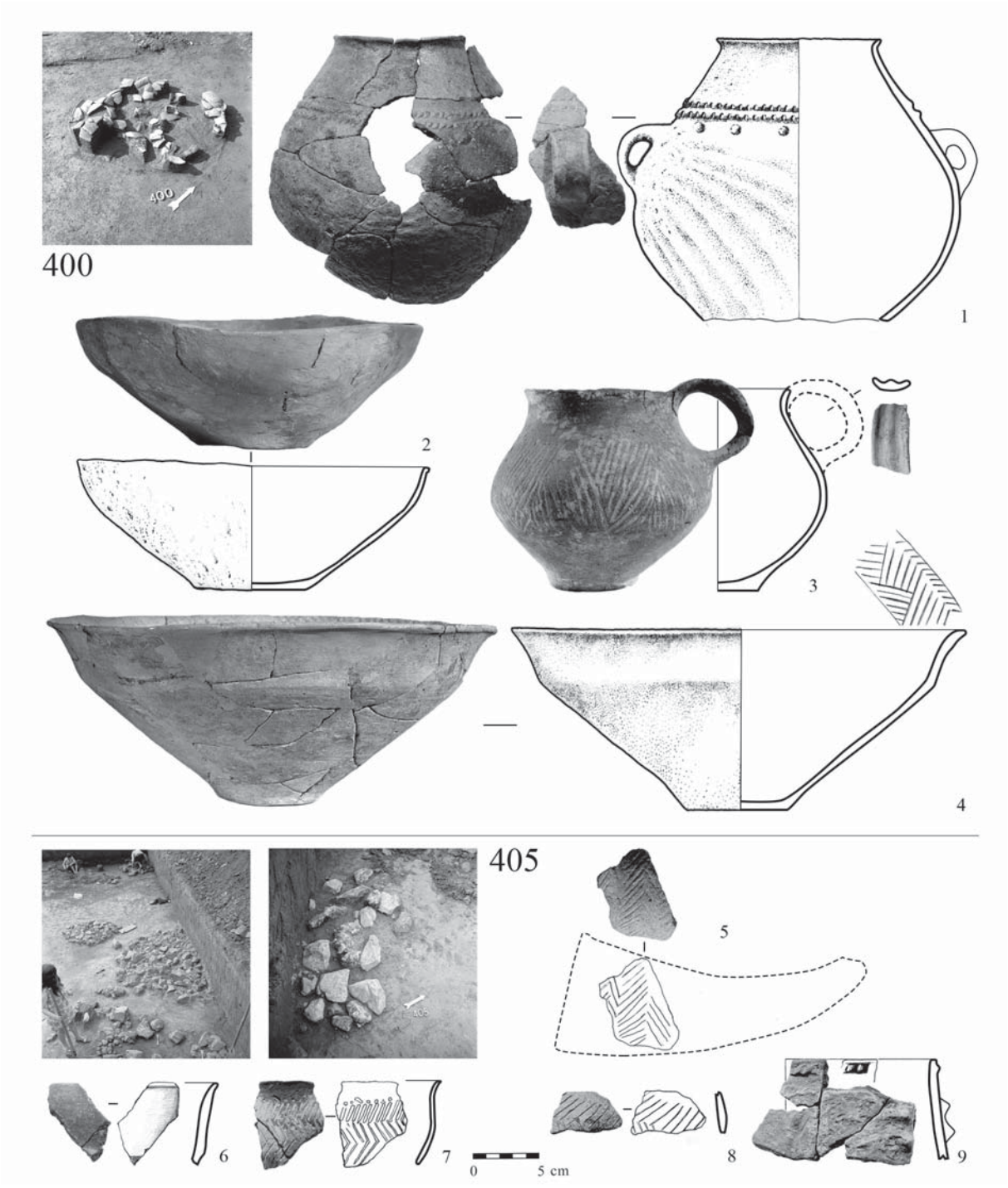


*Plate 28. Pilismarót-Basaharc. Graves 400 and 405*

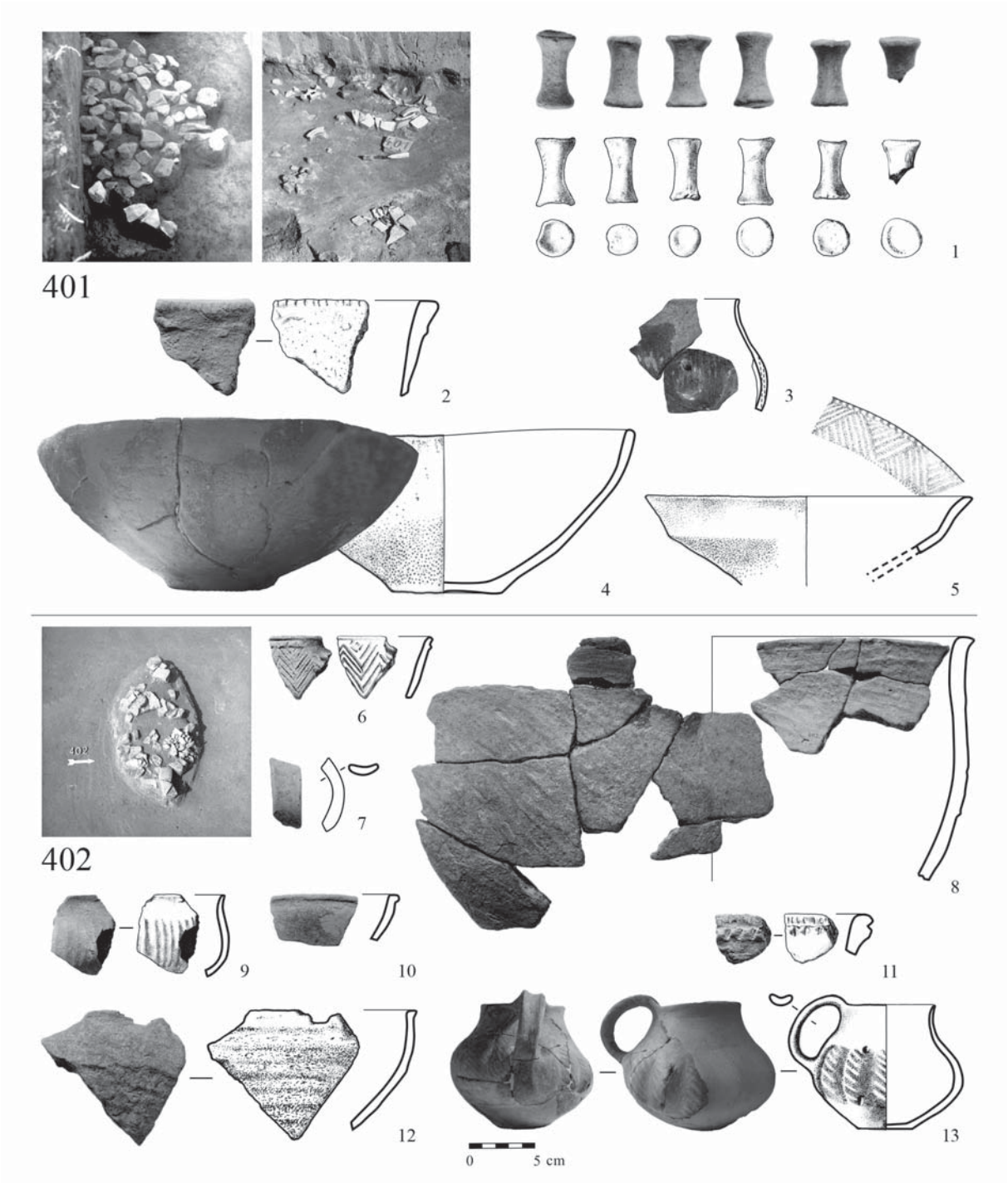


*Plate 29. Pilismarót-Basaharc. Graves 401 and 402*

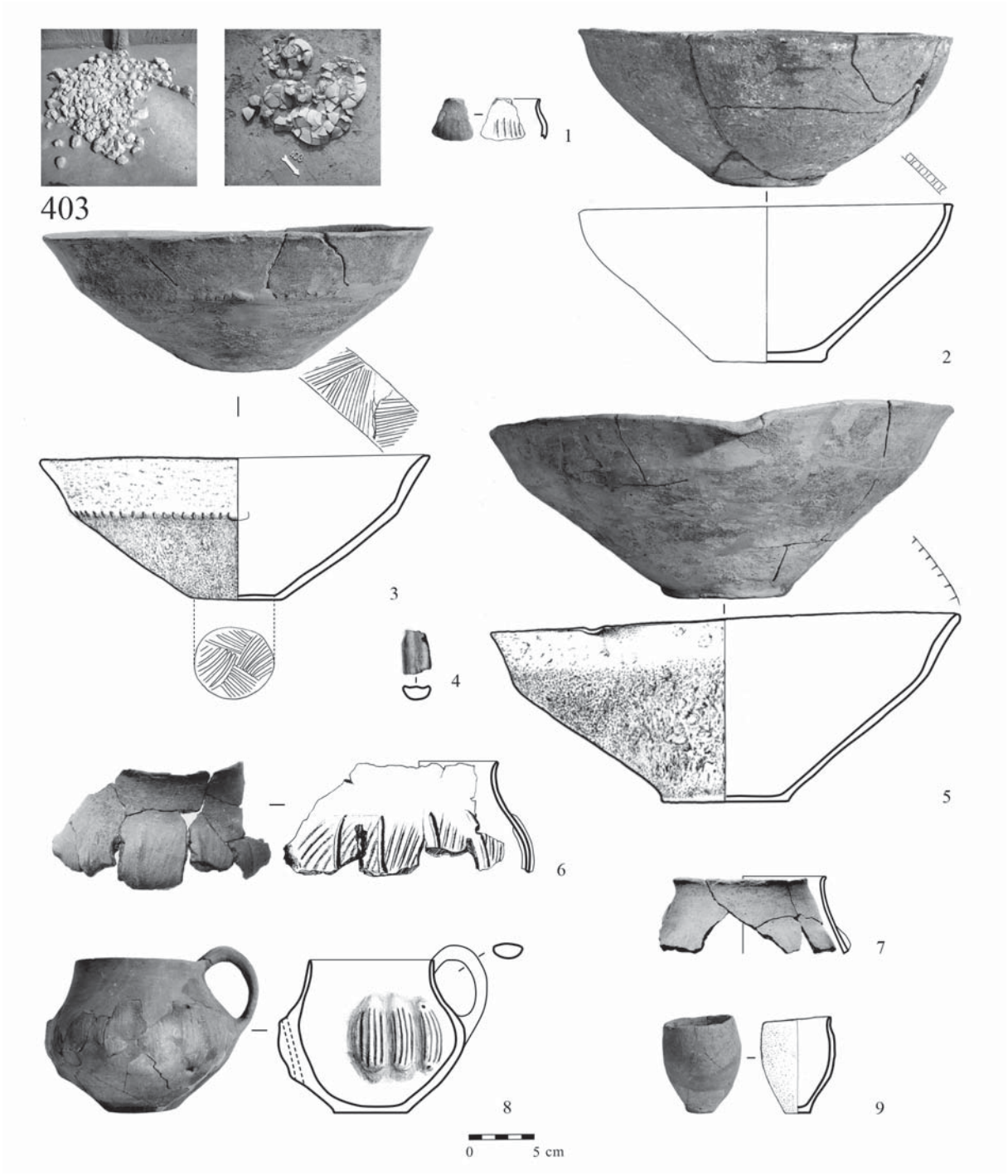


*Plate 30. Pilismarót-Basaharc. Grave 403*

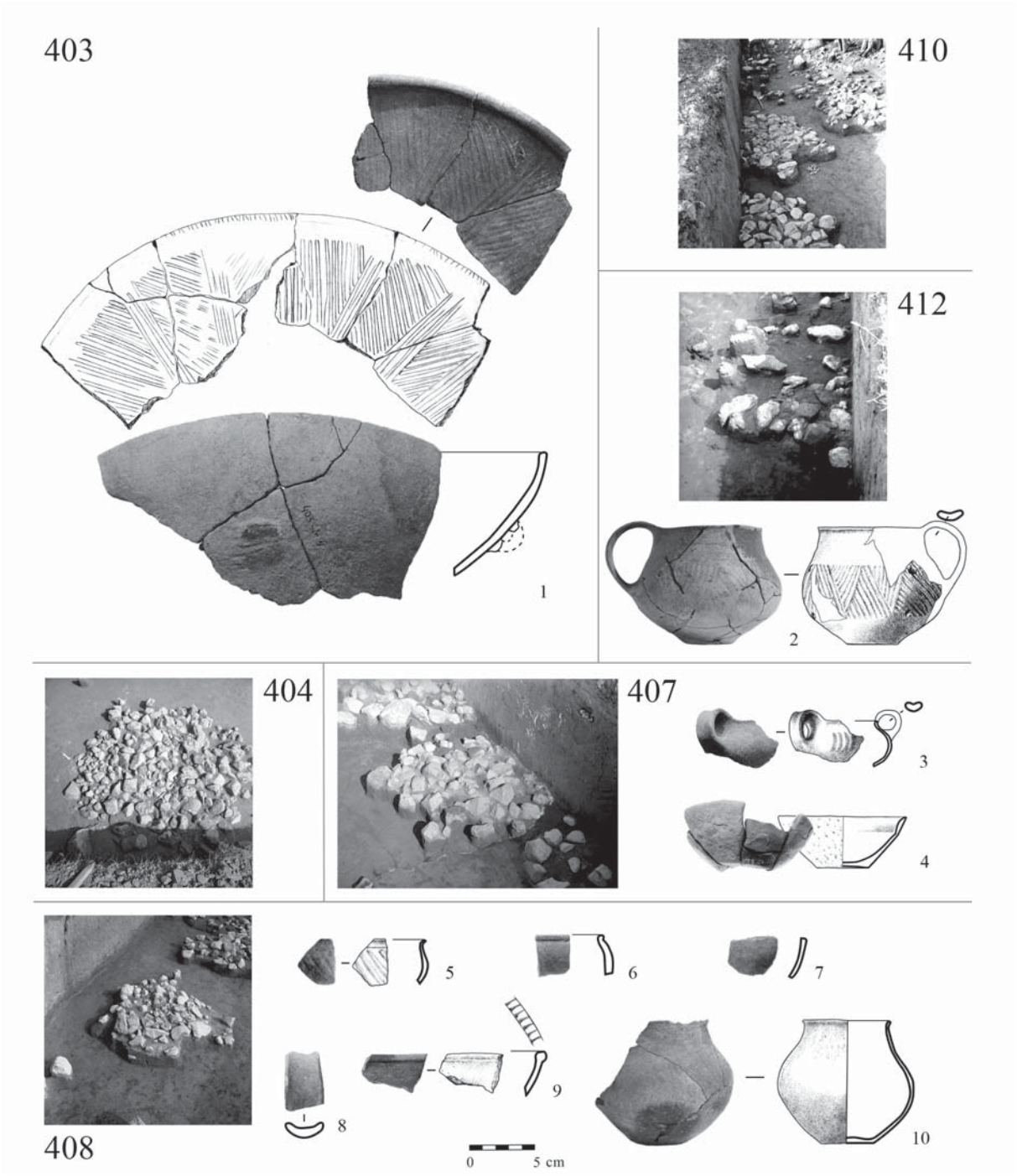


*Plate 31. Pilismarót-Basaharc. Graves 403, 404, 407, 408, 410 and 412*

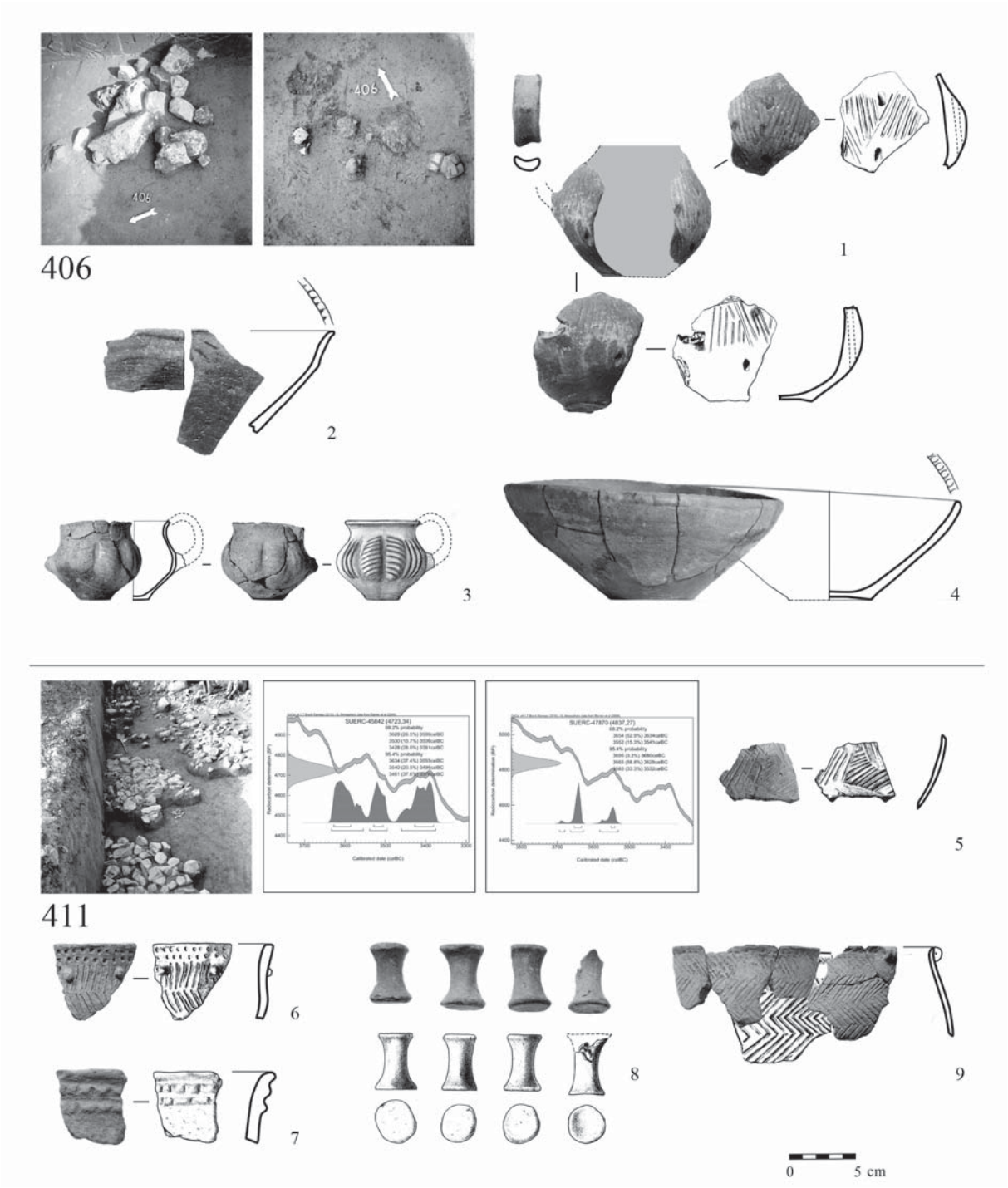


*Plate 32. Pilismarót-Basaharc. Graves 406 and 411*

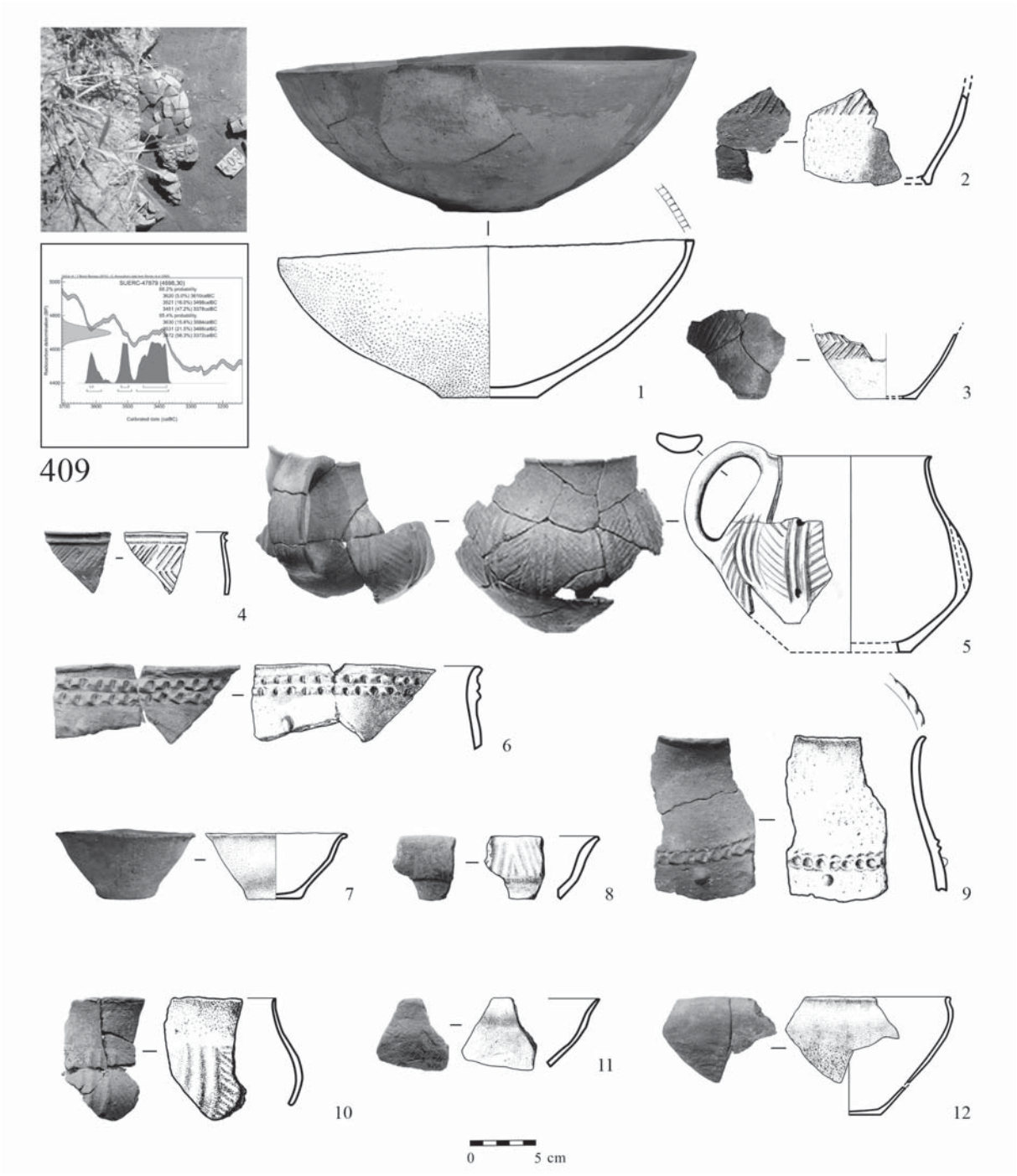


*Plate 33. Pilismarót-Basaharc. Grave 409*

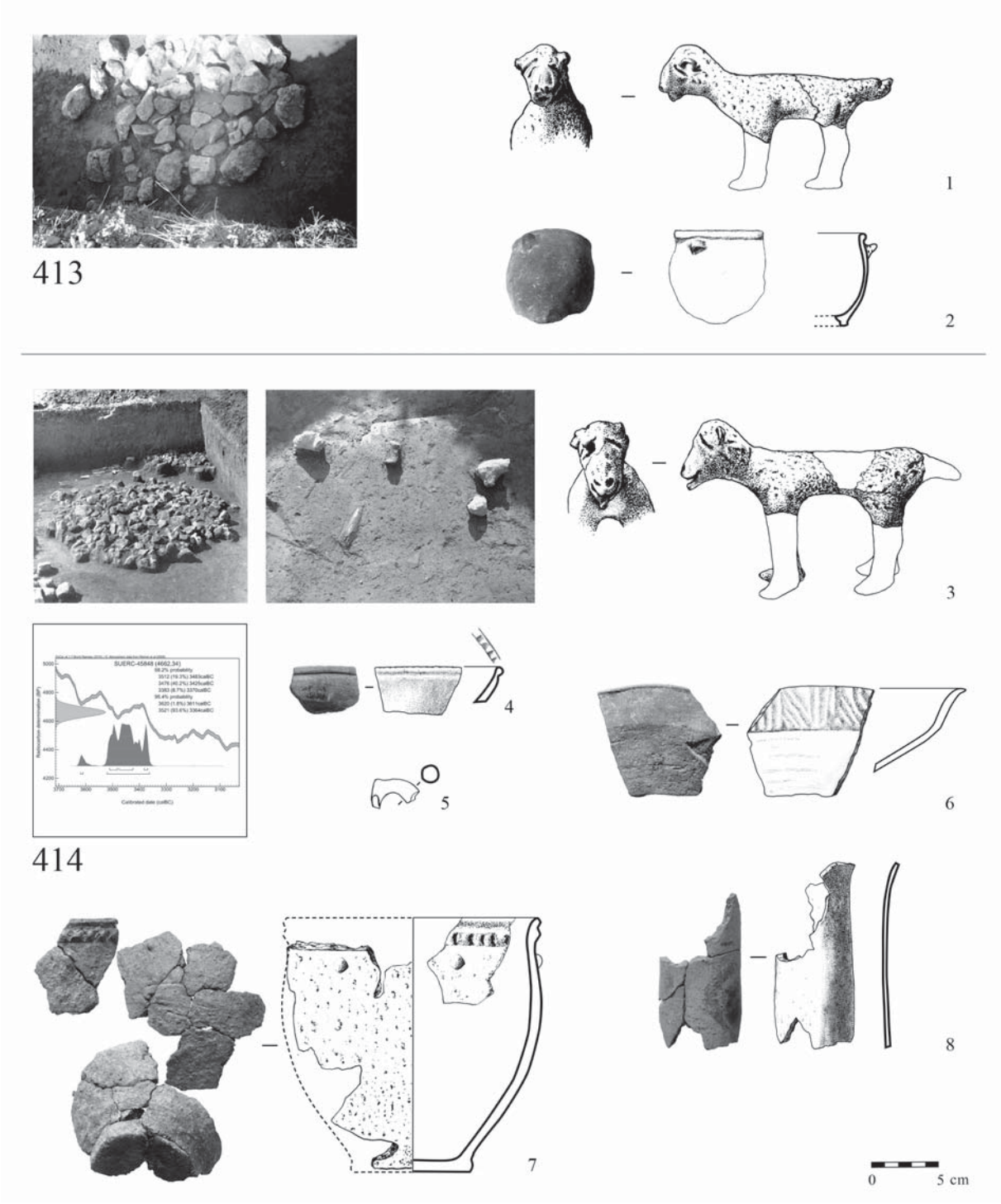


*Plate 34. Pilismarót-Basaharc. Graves 413 and 414*

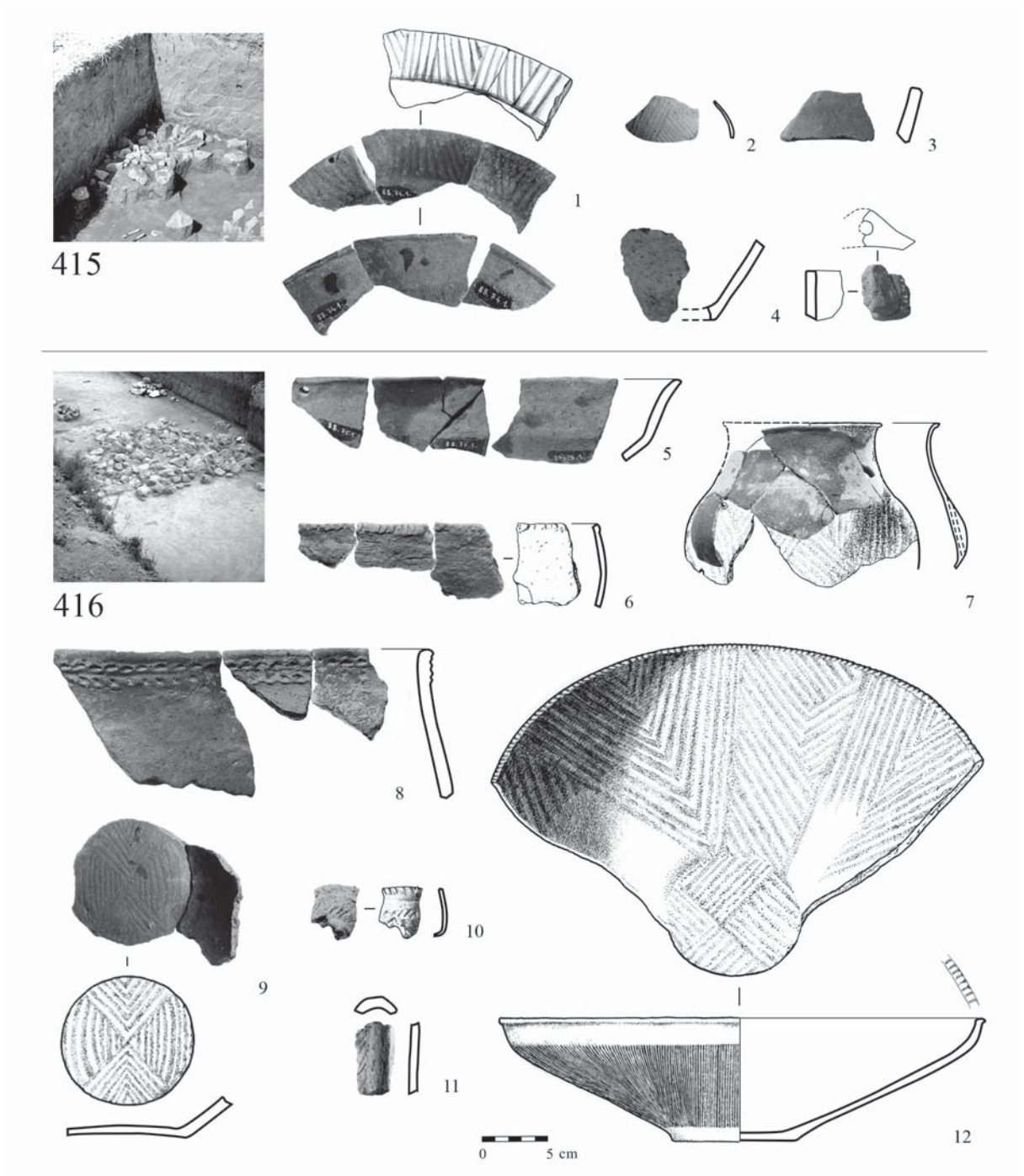


*Plate 35. Pilismarót-Basaharc. Graves 415 and 416*

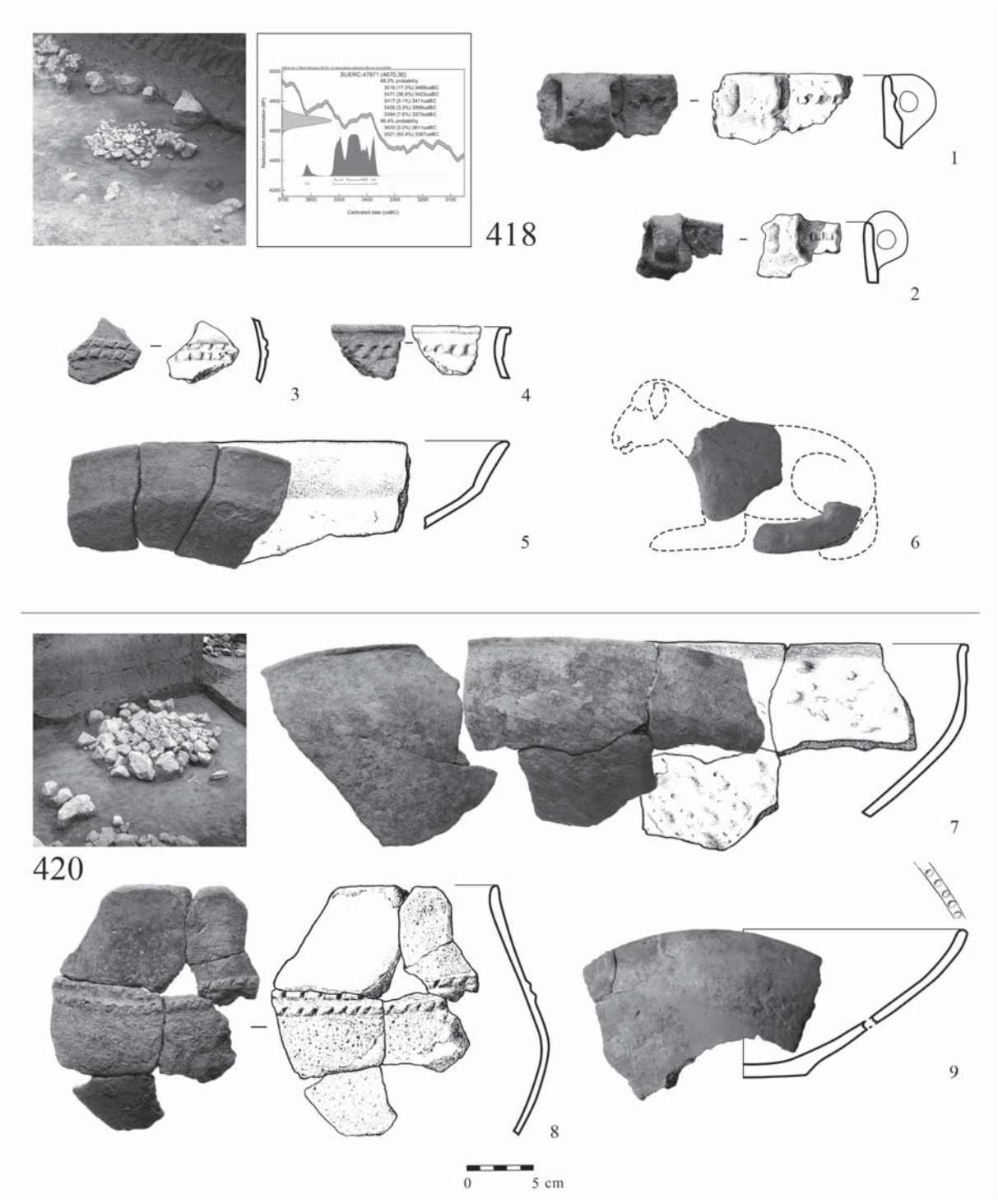


*Plate 36. Pilismarót-Basaharc. Graves 418 and 420*

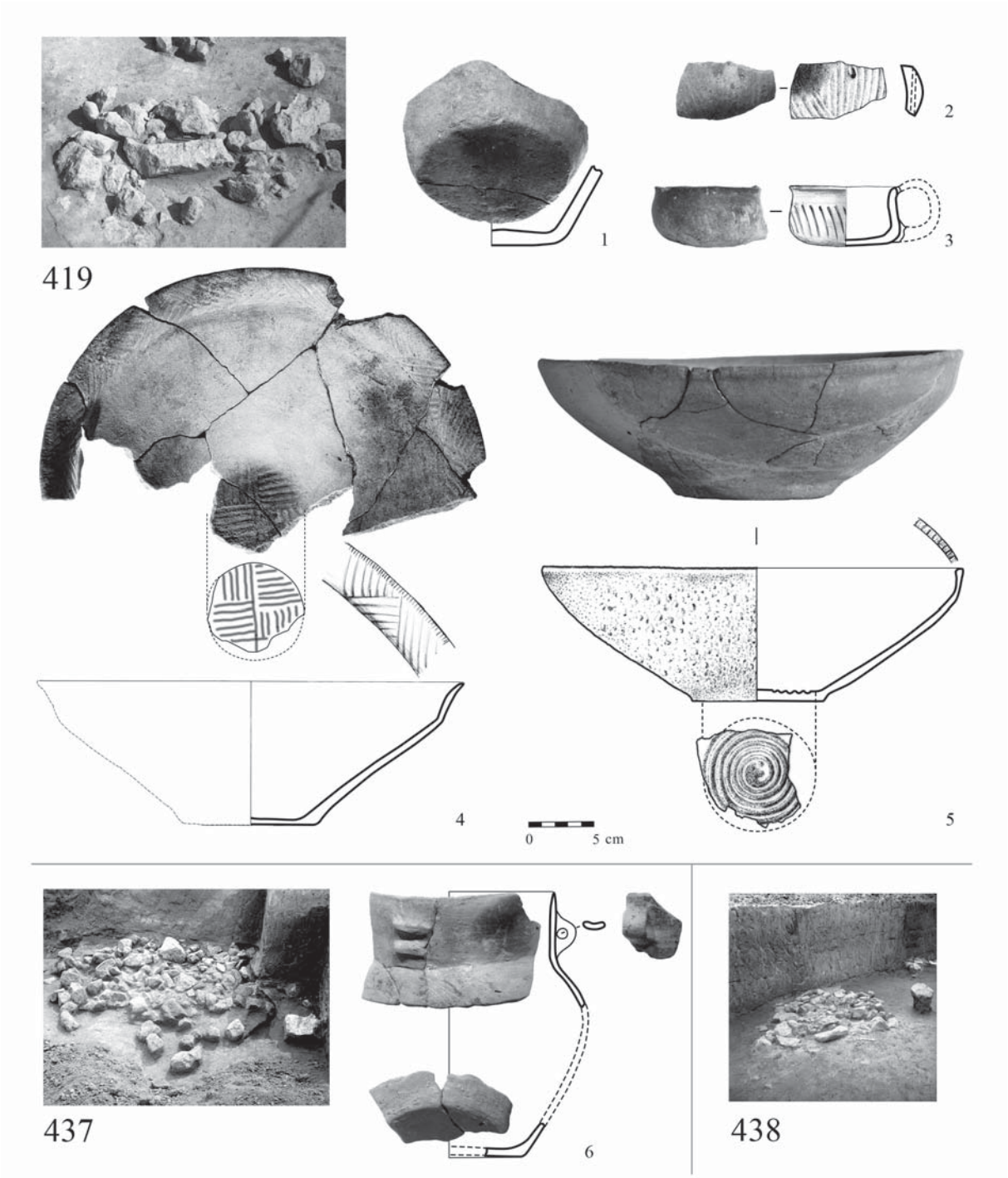


*Plate 37. Pilismarót-Basaharc. Graves 419, 437 and 438*

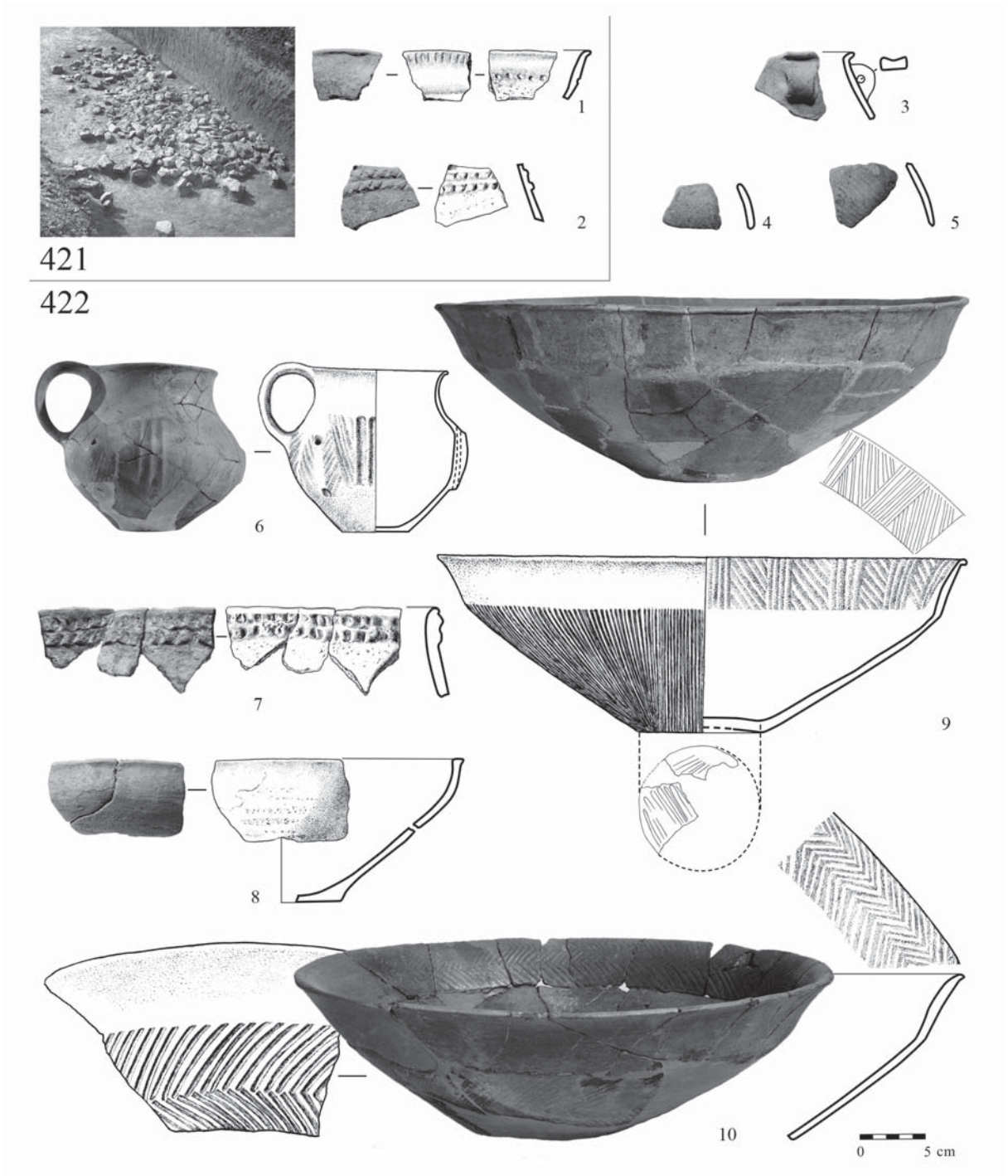


*Plate 38. Pilismarót-Basaharc. Graves 421 and 422*

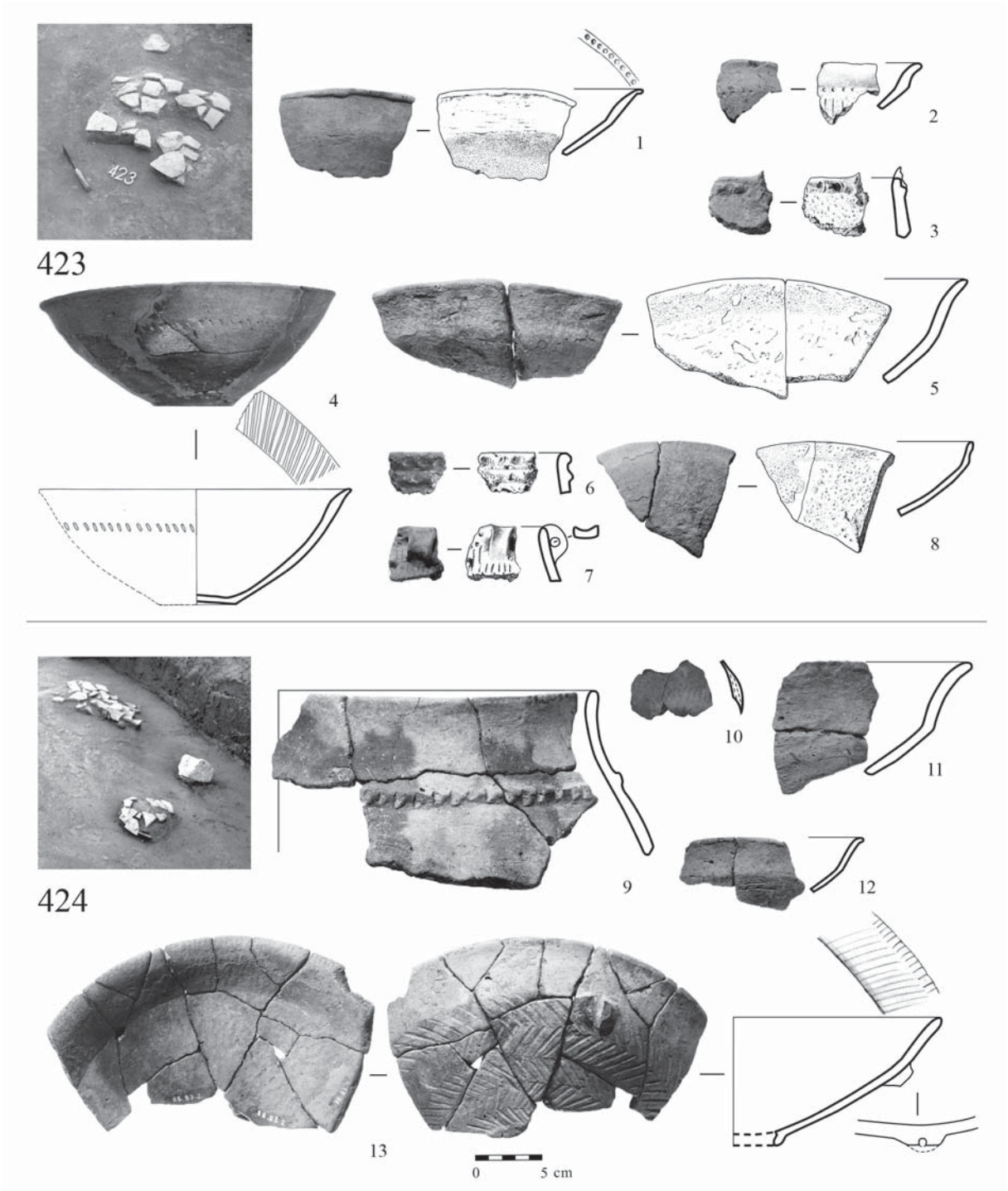


*Plate 39. Pilismarót-Basaharc. Graves 423 and 424*

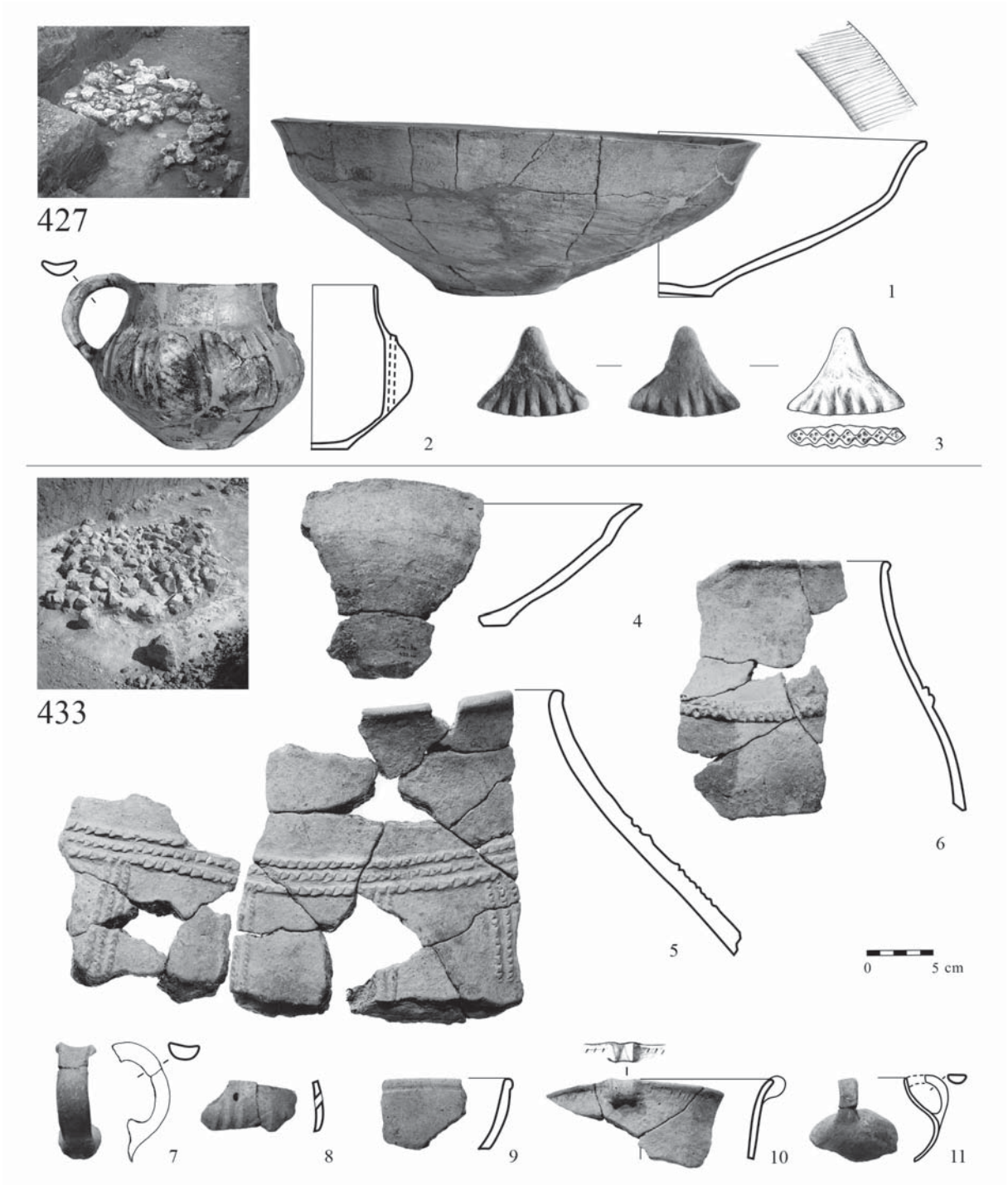


*Plate 40. Pilismarót-Basaharc. Graves 427 and 433*

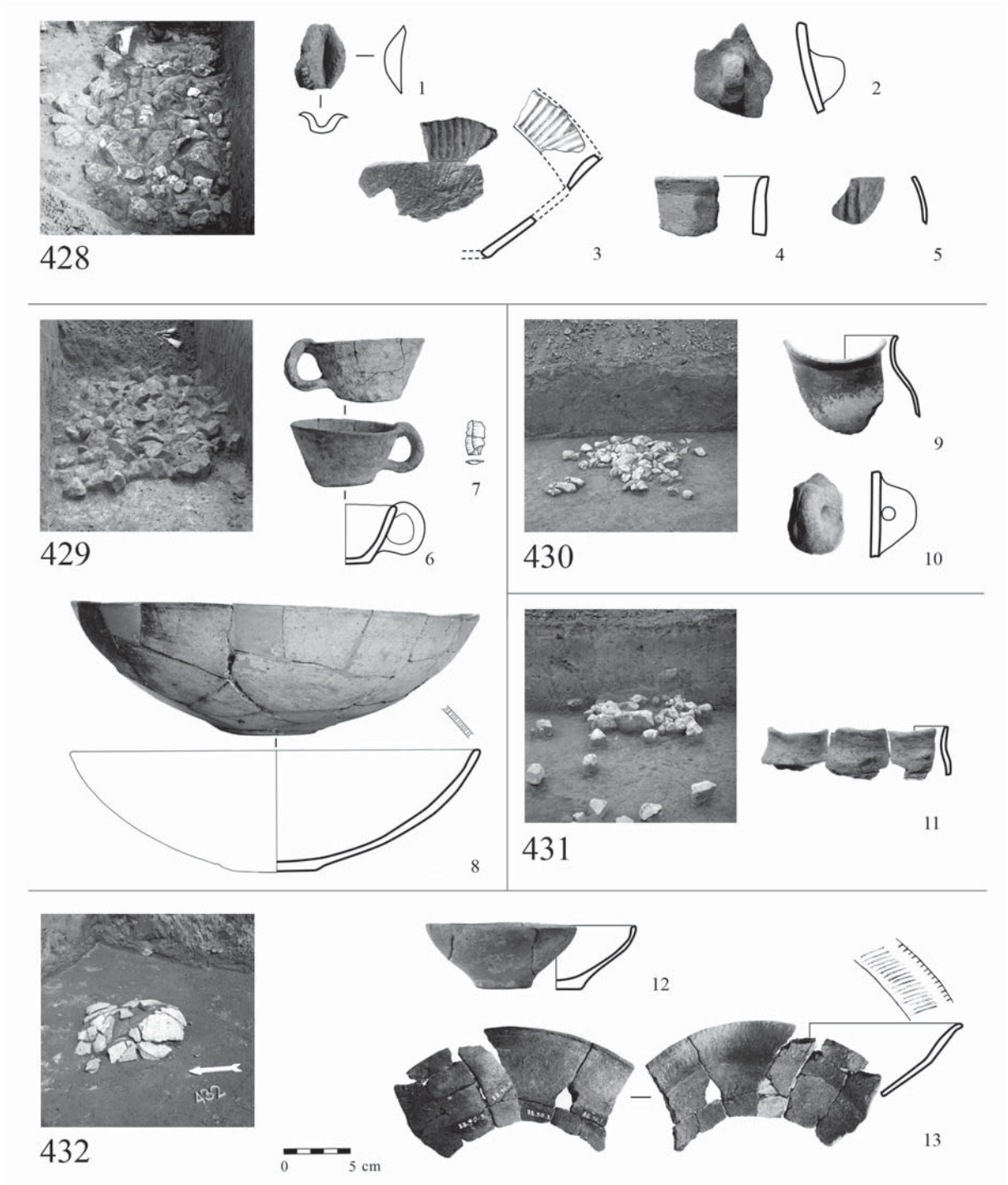


*Plate 41. Pilismarót-Basaharc. Graves 428, 429, 430, 431 and 432*

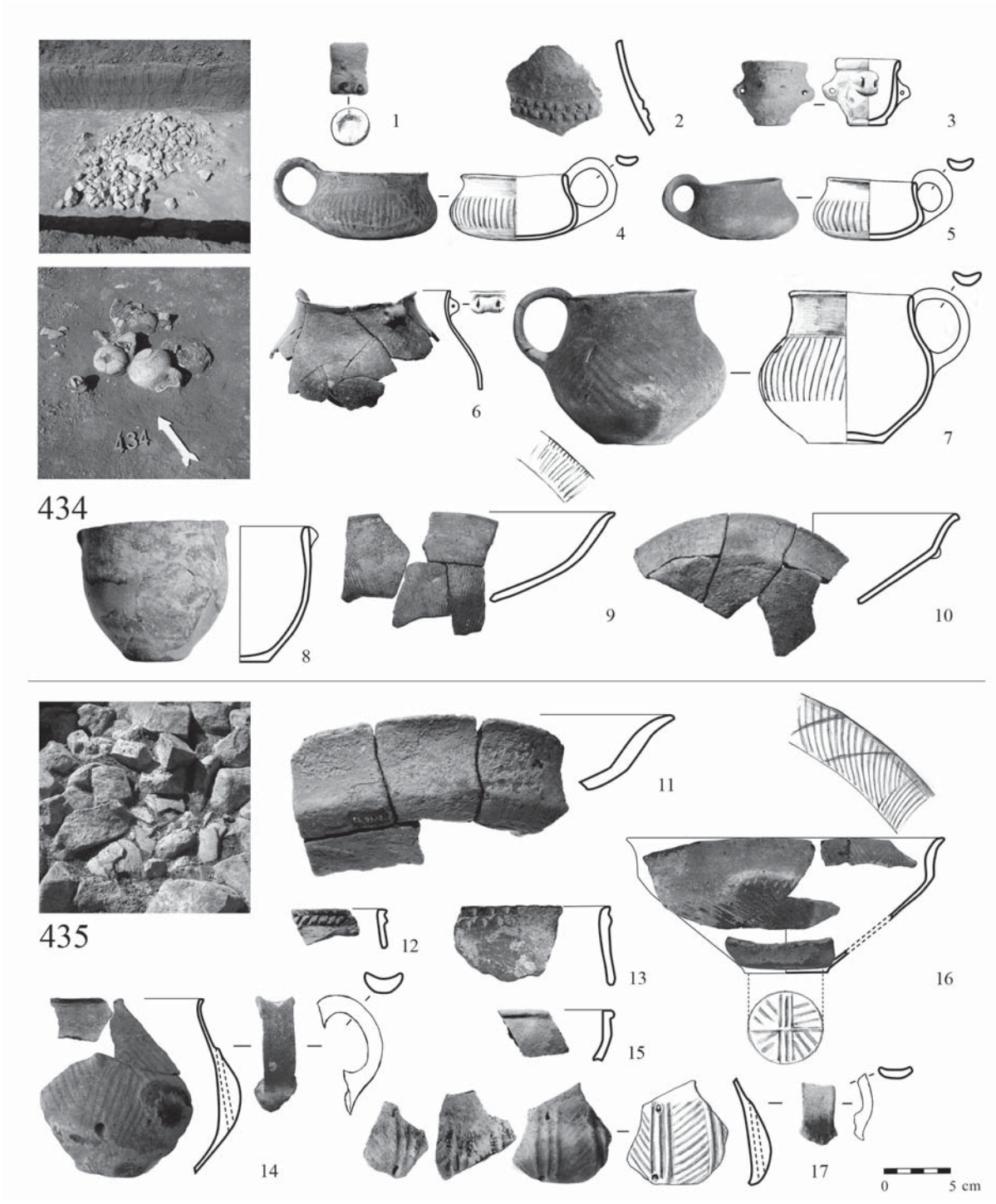


*Plate 42. Pilismarót-Basaharc. Graves 434 and 435*

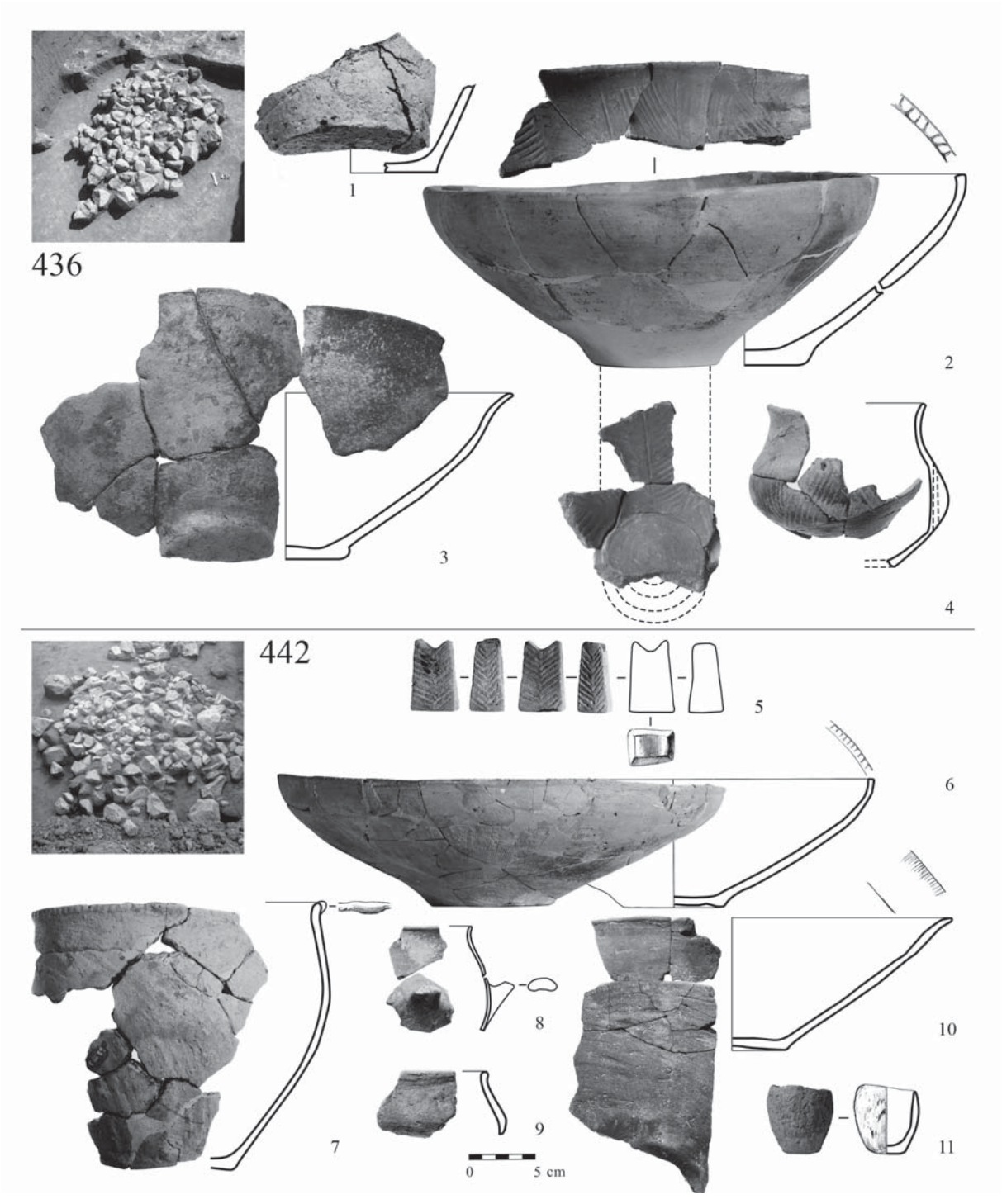


*Plate 43. Pilismarót-Basaharc. Graves 436 and 442*

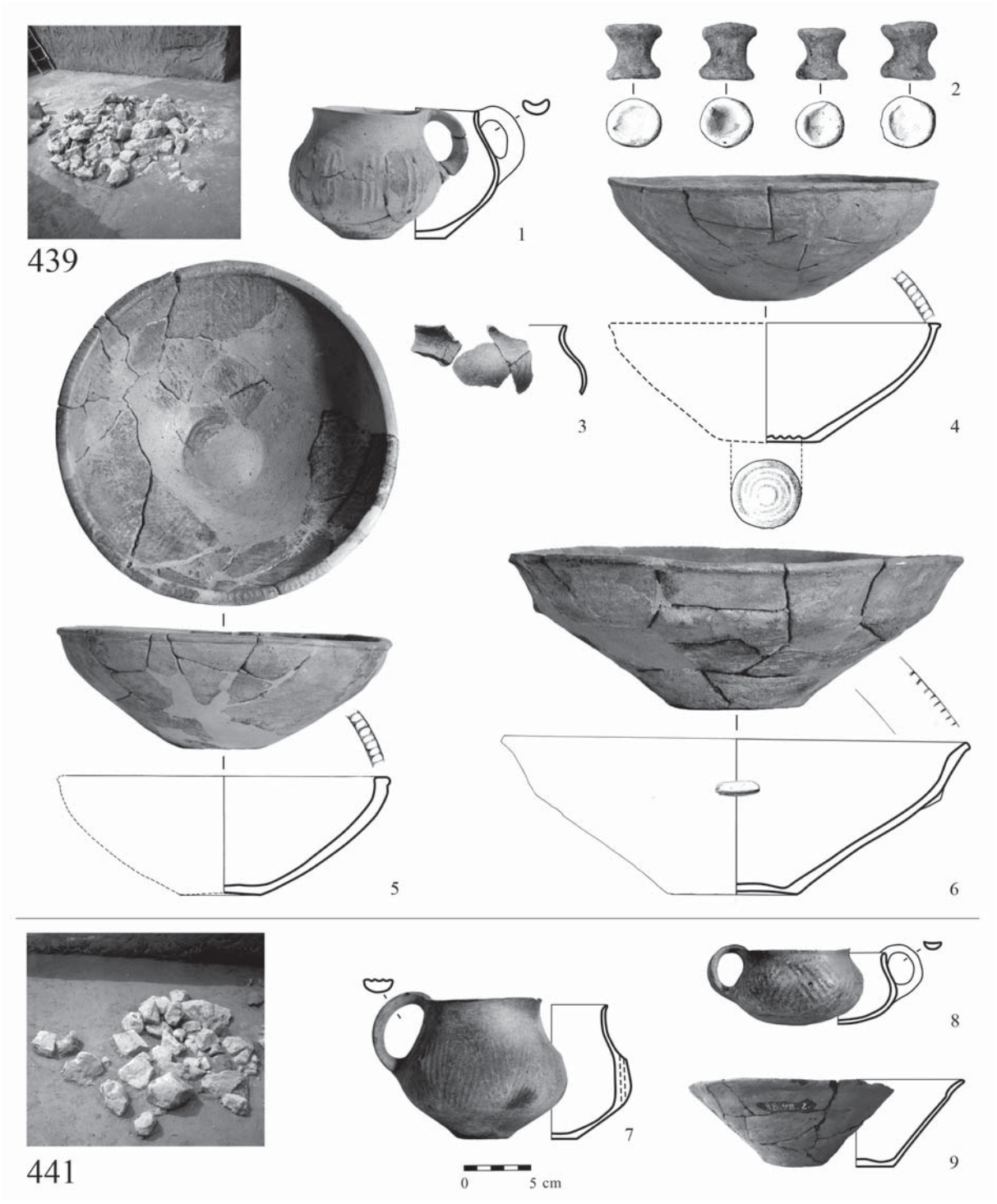


*Plate 44. Pilismarót-Basaharc. Graves 439 and 441*

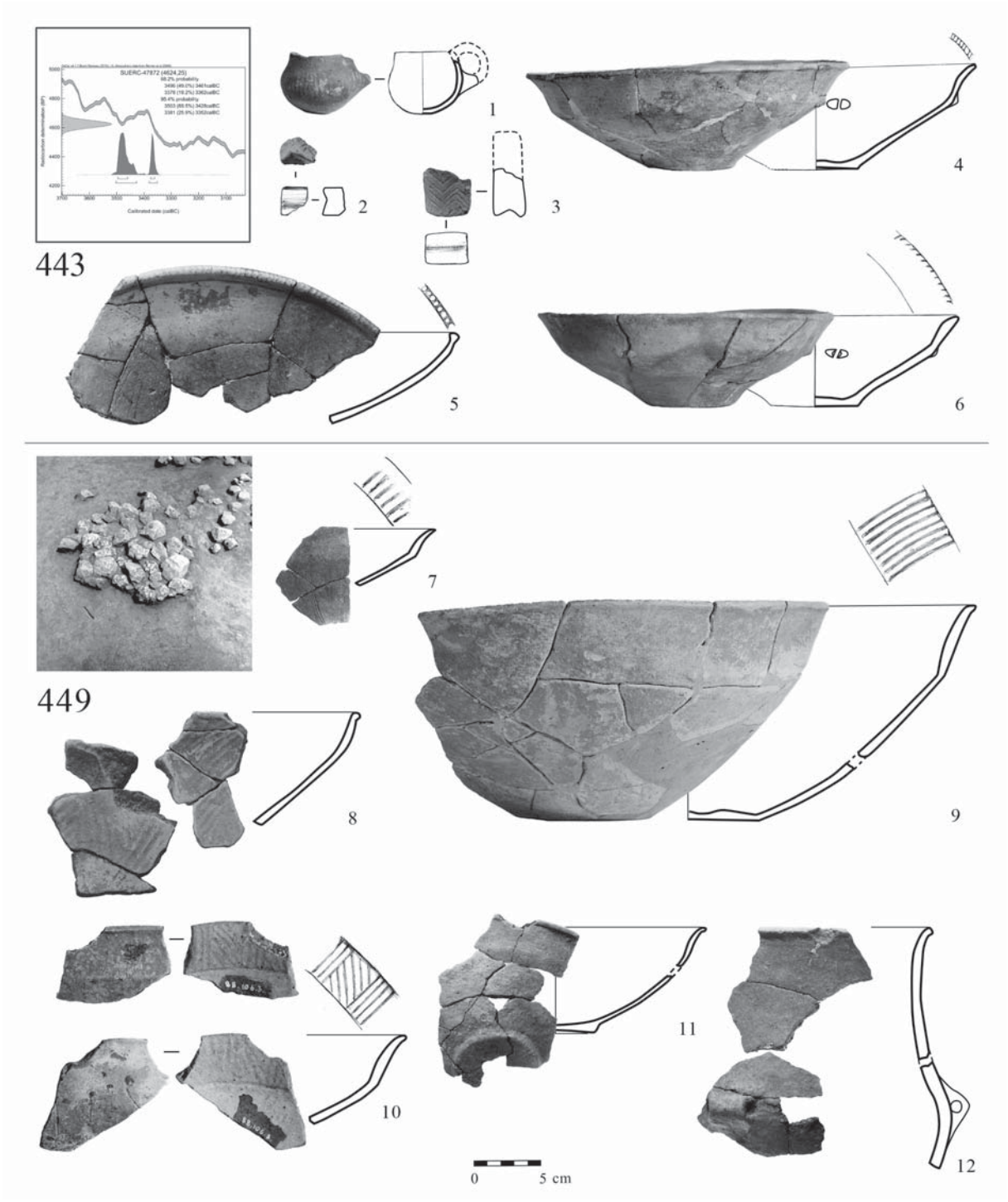


*Plate 45. Pilismarót-Basaharc. Graves 443 and 449*

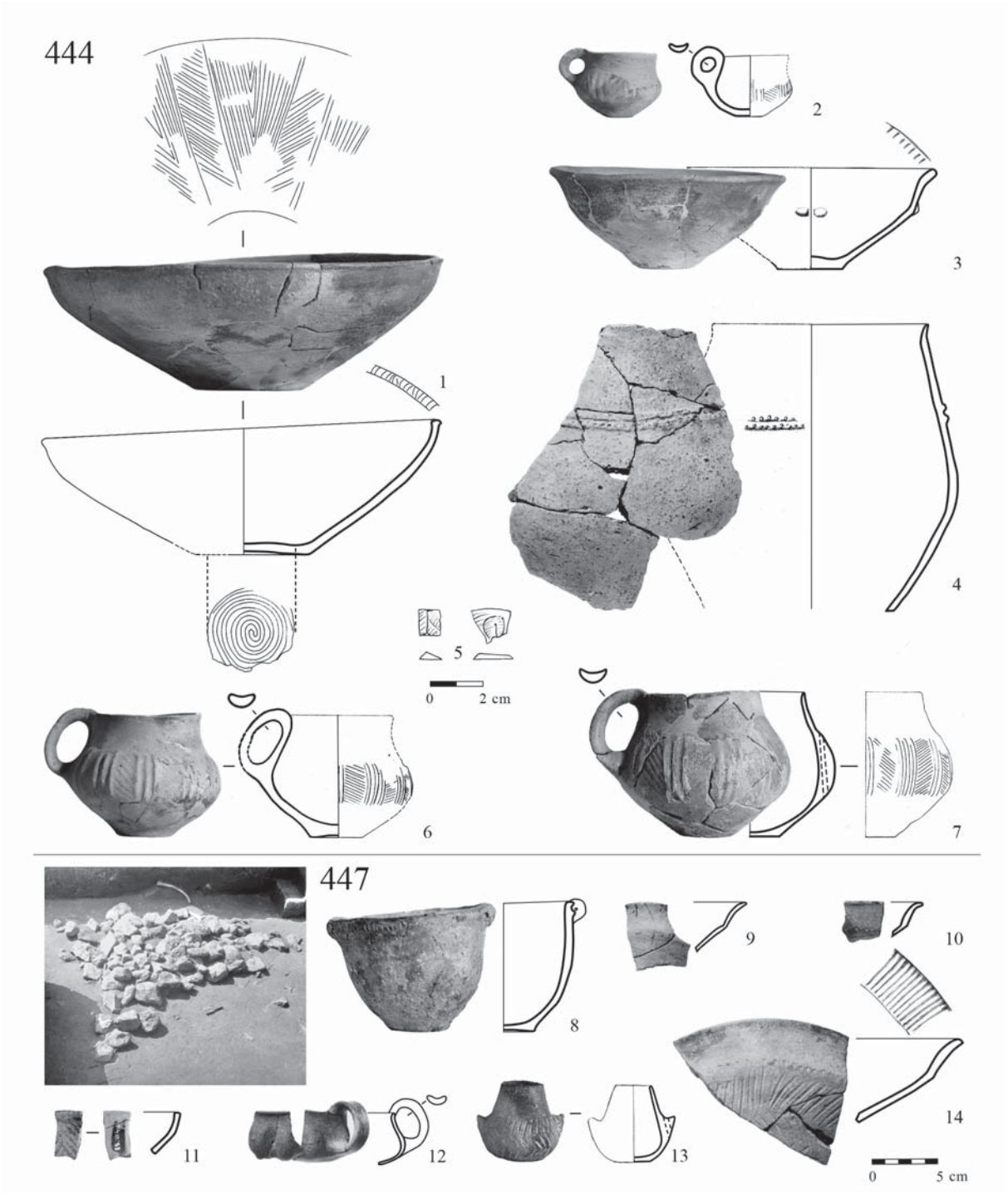


*Plate 46. Pilismarót-Basaharc. Graves 444 and 447*

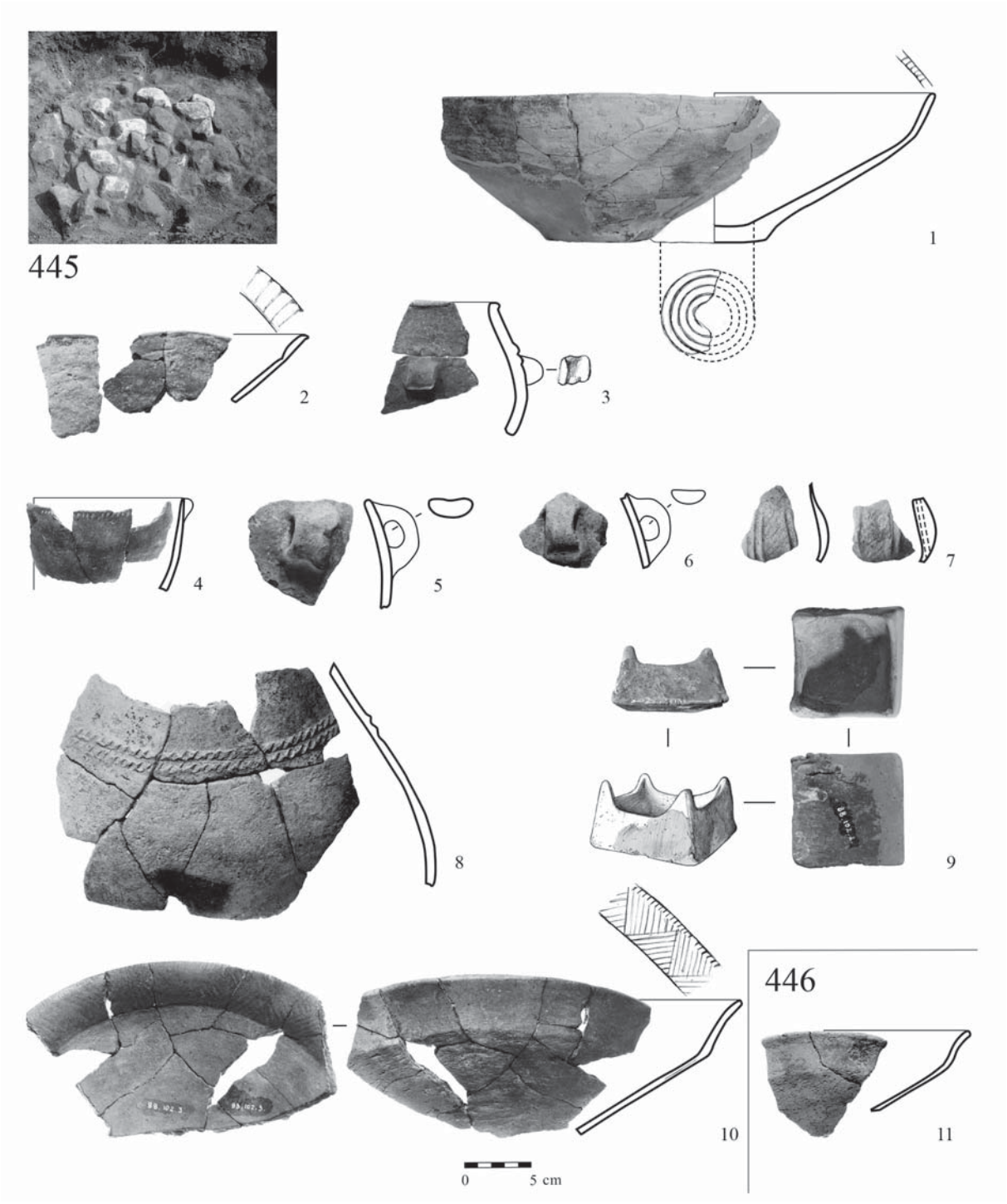


*Plate 47. Pilismarót-Basaharc. Graves 445 and 446*

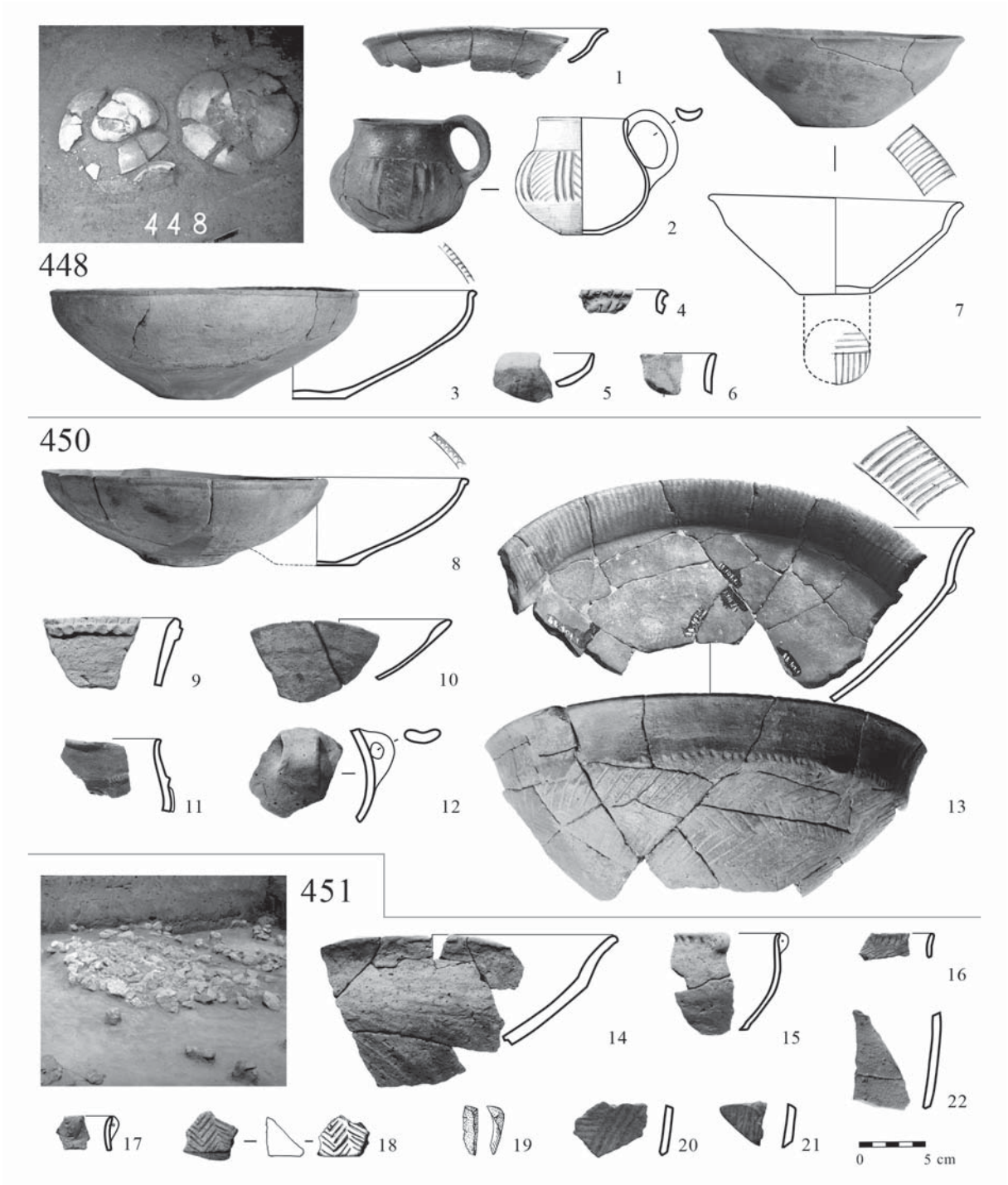


*Plate 48. Pilismarót-Basaharc. Graves 448, 450 and 451*

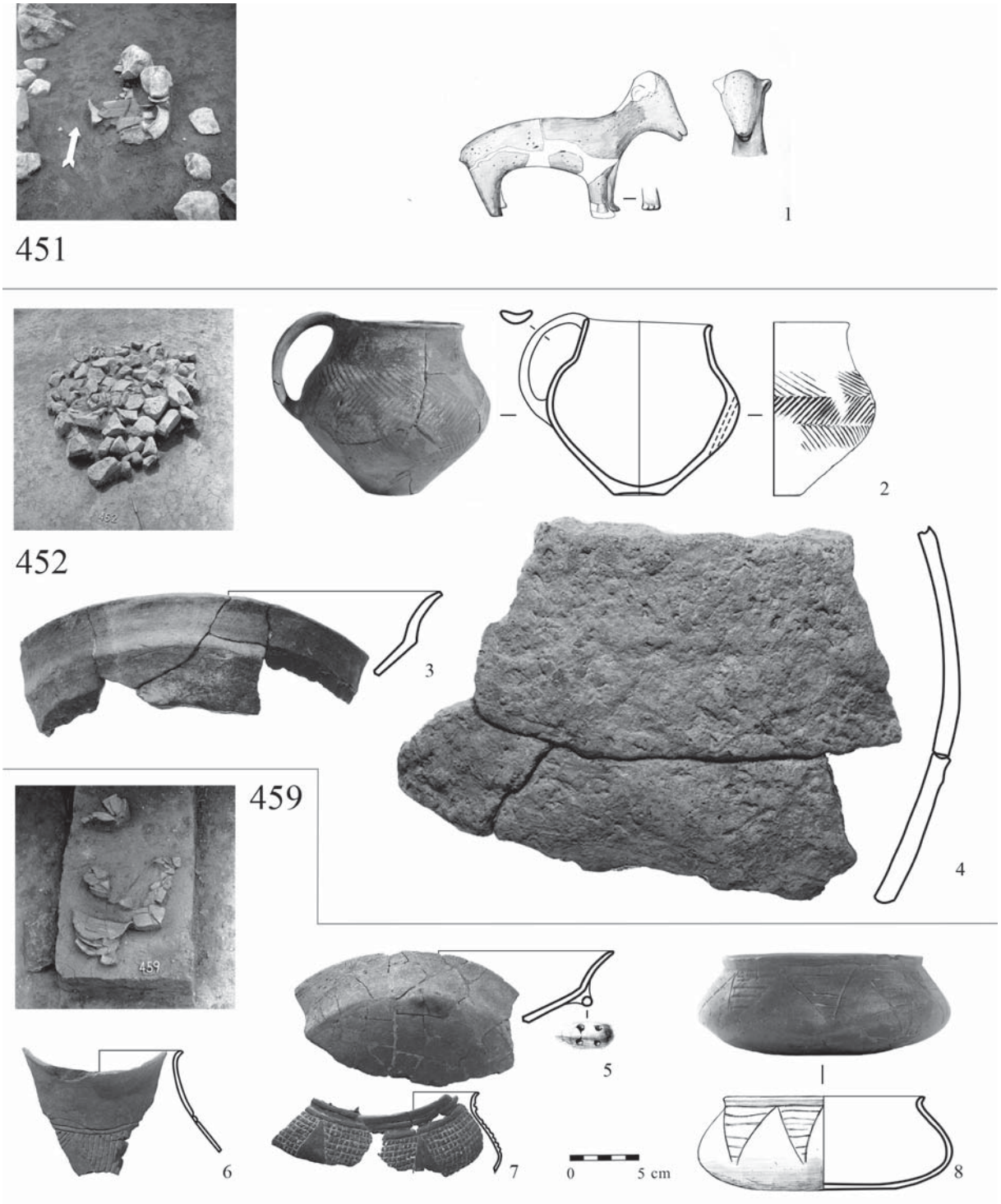


*Plate 49. Pilismarót-Basaharc. Graves 451, 452 and 459*

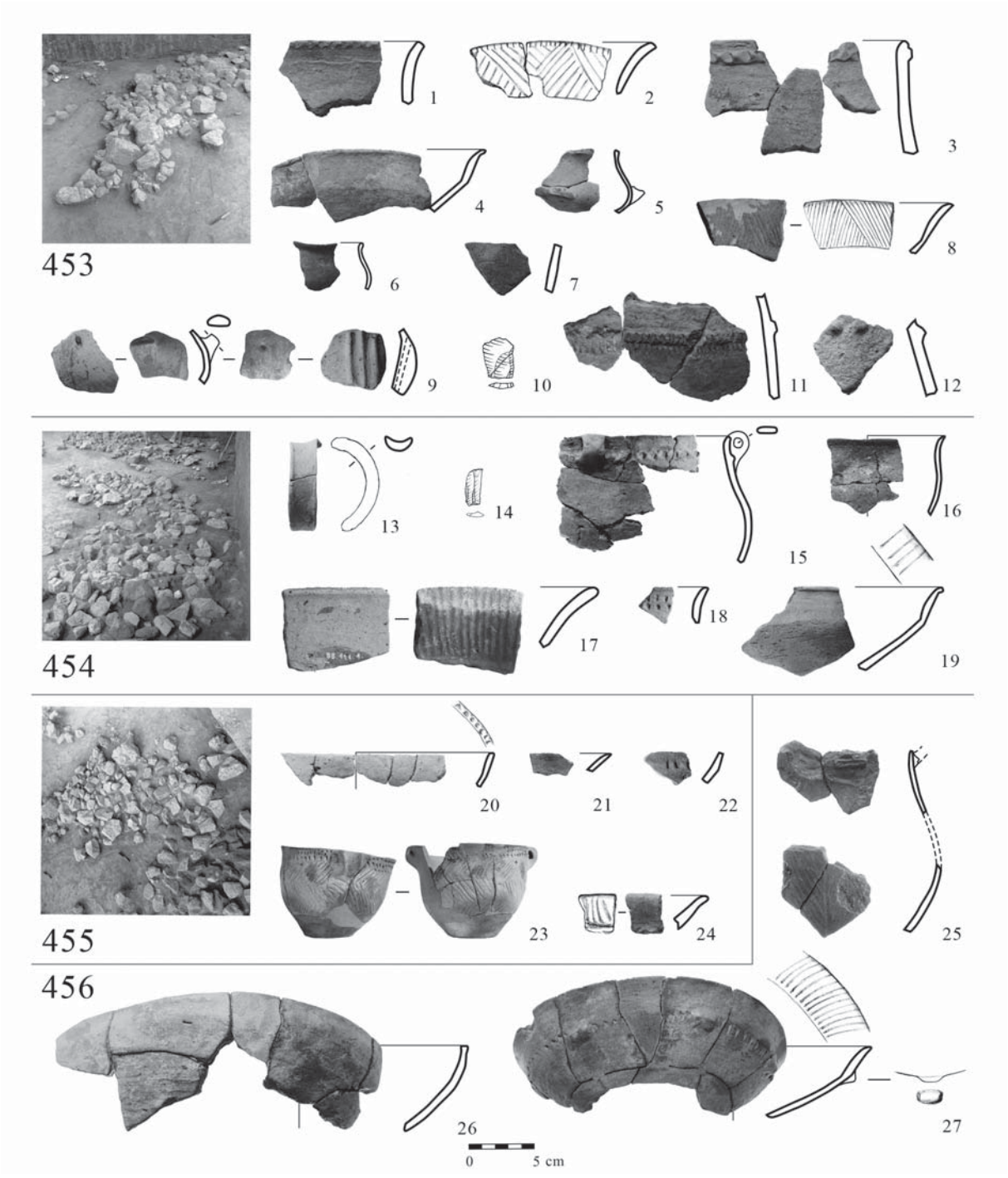


*Plate 50. Pilismarót-Basaharc. Graves 453, 454, 455 and 456*

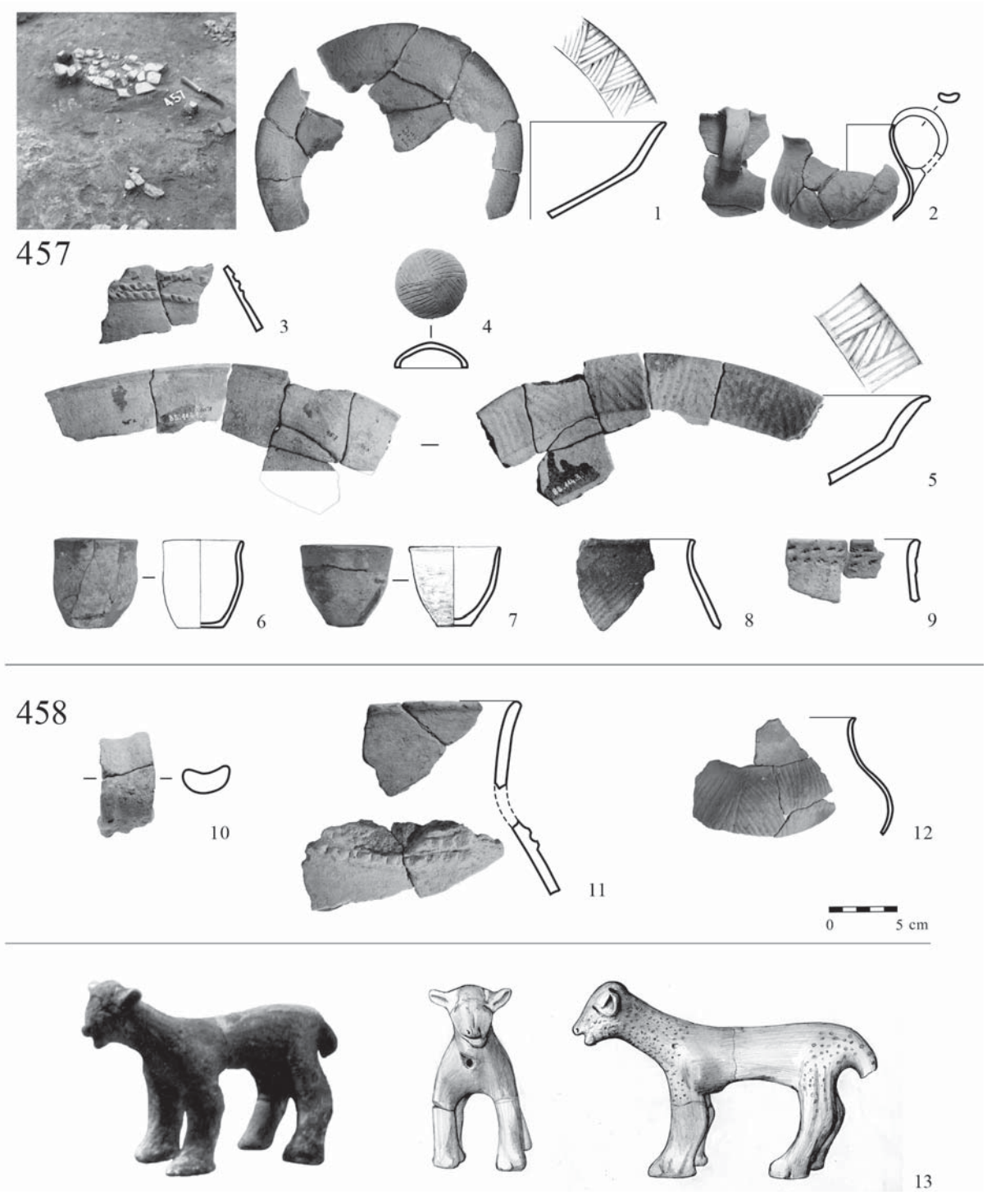


*Plate 51. Pilismarót-Basaharc. Graves 457, 458 and an unstratified animal figurine*

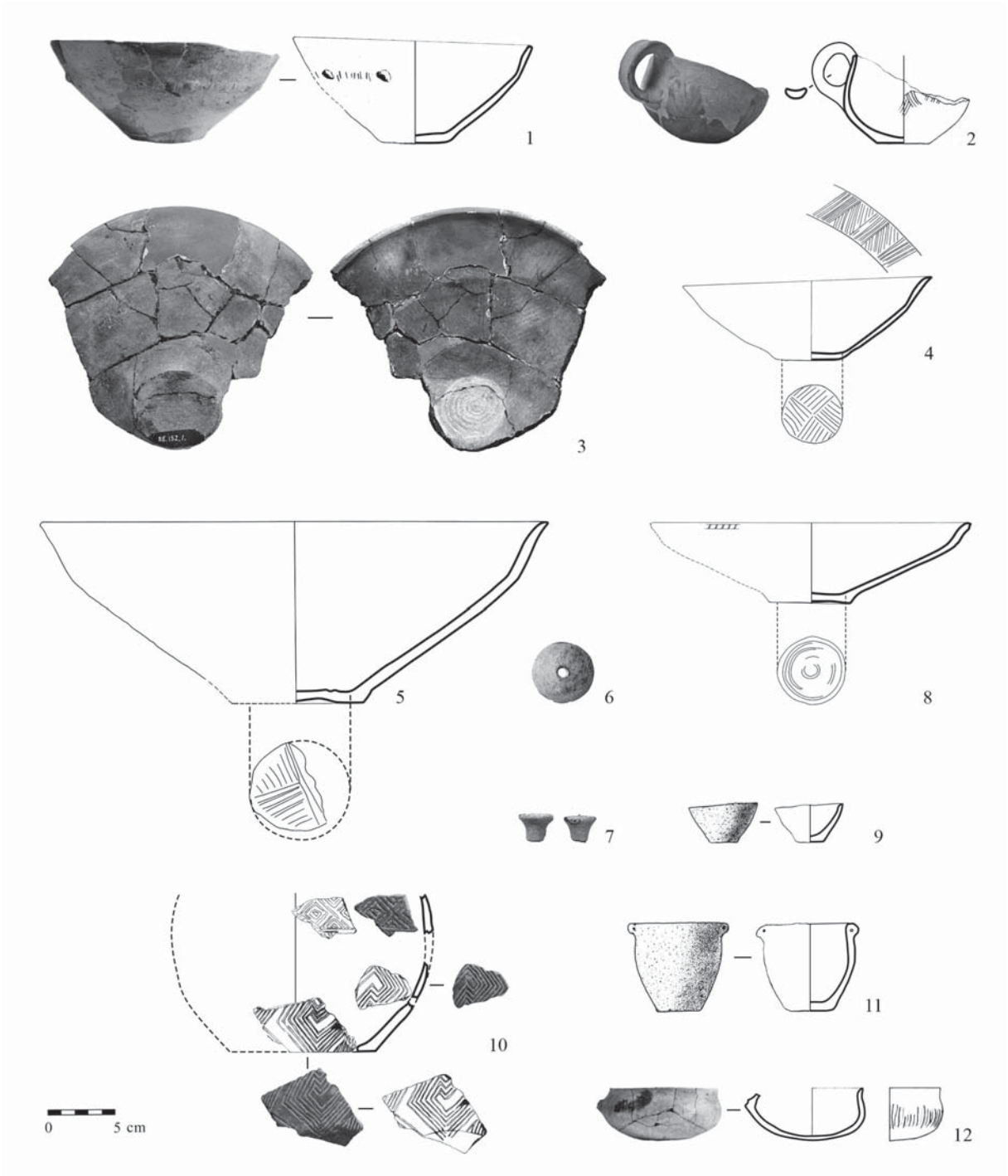


*Plate 52. Pilismarót-Basaharc. Miscellaneous finds from the area of the cemetery*

# III. THE GRAVE GOODS

Burial grounds can be seen as ritual spaces in which the deceased and the goods accorded them were deposited in a certain manner and according to certain culturally prescribed norms. The grave offerings deposited in the burials and the artefacts found in the immediate surroundings of the graves were part of the funerary rite and had a symbolic meaning.

In line with the above, the grave goods include every single artefact placed in the burial as well as the objects found among the stones of the stone packings or near them because they were not in or on the graves by chance – both the intact and the broken artefacts were once elements of the funerary rite vested with a particular meaning.

I have only included the artefacts that could be securely associated with a burial in the typological assessment of the grave goods; the unstratified finds from the excavation trenches and the vessels without a secure grave context were omitted. Graves 404 and 410 did not contain any finds, while the few pottery fragments in Graves 425 and 438 were discarded by István Torma. Eight burials (Graves 342, 347/a, 389, 417, 430, 431, 437 and 446) contained atypical ceramic fragments and Grave 459 could be assigned to the *Furchenstich* period. Thus, my analysis covers the finds from ninety-seven burials, all of which yielded vessels or their fragments.

When assembling the illustrations presenting the finds according to graves, one of my main goals was to provide as much information as possible, and thus if there were two photos of a particular grave (one showing the stone packing, the other after the packing had been removed), I included both.

The grave goods are dominated by pottery, both intact and fragmented, the latter having been deposited as fragments. A few burials yielded stone axes, stone blades, clay spindle whorls, rollers, animal figurines, a clay stamp and clay cones *(Table 1)*. According to the field diary, most burials had also contained mussels and/or snails,[120] and some a few animal bones.[121]

*Table 1. Distribution of grave goods according to types*

| **Grave good type** | **No. of graves** | **No. of items** | **No. of unstratified items** |
|---|---|---|---|
| Pottery | 106 | 560 | 112 |
| Other clay artefacts | | | |
| Stamp | 1 | 1 | – |
| Cones | 4 | 5 | – |
| Spindle whorls | 1 | 2 | 1 |
| Rollers | 4 | 15 | 2 |
| Clay spoon | 1 | 1 | – |
| Rhytons | 2 | 2 | – |
| Animal figurines | 5 | 5 | 1 |
| Wagon model | 1 | 1 | – |
| Lithics | | | |
| Stone axes | 3 | 4 | – |
| Other lithic finds | 7 | 9 | |

[120] However, most of these were discarded and only a few were kept. I am grateful to Pál Sümegi for the species identification of the snails and the mussels.

[121] All the animal bones found in the graves were packed away with the other finds during the excavation. The species determination of the few animal bones was performed by Erika Gál (see pp. 367–379).

## 1. Pottery

There have been repeated efforts to construct a ceramic typology for the Late Copper Age Baden culture and a number of classificatory systems with varying degrees of detail have been elaborated during the past decades.[122] As a result, the Baden ceramic sequence is fairly well known, as are the culture's main vessel types, although a "master sequence" that could be applied to every site and every type is still lacking;[123] moreover, it is increasingly difficult to find one's way through the maze of typologies created for a particular site and the correlation of the different typological schemes is virtually impossible.

One of the very first ceramic sequences was elaborated by Evžen Neustupný,[124] whose typological system was heavily criticised and never became generally accepted, even though it is still quite useful because it accurately defines the main tendencies of the Baden pottery sequence. The most detailed and most oft-quoted typological system was worked out by Viera Němejcová-Pavúková, who devoted several studies to the classification of Baden vessels and the culture's internal chronology and cultural contacts based on the "development" of vessel forms and ornamental motifs as well as their changes.[125] We encounter different labels and sites assigned to different phases in her publications. I have recently offered an overview and a critique of Němejcová-Pavúková's typological scheme.[126]

However, ceramic typology is insufficient in itself and a chronology based exclusively on typological traits alone is no longer acceptable. Typological schemes and even the very concept of an archaeological "culture" have come under increasingly heavy fire,[127] with proposals to instead speak of "ceramic styles".[128] However, it is virtually impossible to squeeze the regional and chronological variations and ceramic changes reflected in minute details into a single uniform typological system of a "culture" – now rather called the Baden complex[129] – distributed over an extensive territory and producing highly similar vessels. Perhaps this is one of the main reasons that a new typological scheme is added to the already existing ones every time a larger body of ceramic finds is assessed.

The basic typological framework of the vessels from the Pilismarót cemetery can be found in Torma's study published in 1973,[130] which covered the finds from the first two excavation seasons.[131] Later, in his assessment of the pits uncovered in Pári, he constructed a more detailed typology in which he cited several vessels from the Pilismarót cemetery and fitted them into the Boleráz-Baden sequence.[132] Torma wrote a brief overview of the Boleráz group for *Régészeti Kézikönyv* [Handbook of Archaeology] which

[122] The main publications, in chronological order, are as follows: Neustupný 1959; Němejcová-Pavúková 1964; Neustupný 1966; Neustupný 1973; Torma 1973; Torma 1977; Němejcová-Pavúková 1979; Němejcová-Pavúková 1981; Němejcová-Pavúková 1984; Točík 1987; Němejcová-Pavúková 1991; Endrődi 1997; Bondár 2000; Nevizánsky 2001; Nevizánsky 2002; P. Barna 2003; Kalicz 2004; Nevizánsky 2004; Nevizánsky 2005; Horváthová 2007; Bondár 2008; György 2008; Bondár 2009a; György 2009; György 2009a; Furholt 2009; Bondár 2010; Nagy 2010; Horváthová 2010; Spasić 2010; Spasić 2011; Horváth 2011; Horváth 2011a; Horváth 2012a; Horváth 2014.

[123] Bondár 2010, 307.

[124] Neustupný 1959.

[125] Němejcová-Pavúková 1979, 1981, 1984, 1991, 1998.

[126] Bondár 2010.

[127] Furholt2008; Kristiansen 2014; Sørensen 2015.

[128] Furholt 2008.

[129] Furholt 2008; Raczky 2009.

[130] Torma 1973.

[131] Torma 1973, 484.

[132] Torma 1977.

never reached publication, for which he prepared a series of typological charts based on the then known Boleráz finds and the new material from the Pilismarót cemetery.[133]

While the current typological assessment is in part based on Torma's primary classification, the typological scheme presented here rests on the entire range of finds recovered from the graves and thus my designations of vessels are not always identical with the ones used by Torma.

Ideally, typological categories can best be set up on the basis of intact and refittable vessels, and I made very effort to do so in the assessment of the Pilismarót cemetery. I only classified a particular vessel as a separate type on the basis of broken vessels if it could be clearly established from one or more traits that the fragment(s) indeed represented a separate category. When quoting analogies, I focused on intact (or refitted, reconstructed) vessels from securely dated contexts and I have refrained from quoting similar, but fragmentary pieces known from various pottery assemblages.

The typological assessment of the vessels from the Pilismarót-Basaharc cemetery presented here is not an evaluation with a focus on the tiniest detail. My goal was not to offer a detailed description of each and every vessel, or to list all the known analogies, but rather to find the common elements that outlined a broader category and, at the same time, to identify the minor differences and characteristic traits that can provide reliable anchors for the overall analysis of the cemetery, as it proved possible in the case of the Budakalász cemetery. Vessels made by the same potter recovered from different graves provide incontestable evidence for the rough contemporaneity of the burials in question and thus offer reliable anchors for the cemetery's internal chronology.[134]

The pottery of the Baden culture, made using similar potting techniques and adorned according to similar ornamental principles, was distributed over an extensive territory, suggesting that the standard vessel forms and the applied combination of decorative elements were the visual expressions of a cultural tradition. I have also assumed that the combination of various ornamental elements did not depend on the momentary whim of the potter, but was a cultural "constant" passed on from one generation to the next. If the same vessel type can be found with and without ornamentation, in normal and miniature sizes, and if these varieties occur in the same grave (as they often do), it can hardly be ascribed to mere chance.

It was often impossible to reconstruct the decorative pattern from the ornamental elements on vessel fragments because a particular decorative element was often combined with other applied, incised or impressed motifs with a wide range of variations. This is especially true of the fragments of bowls with lavishly decorated interior, in whose case the original design could not always be reconstructed with absolute confidence based on the intact pieces.

The vessels from the Pilismarót-Basaharc cemetery are generally reddish-brown with grey mottling, indicating firing in a neutral atmosphere. The ceramic inventory includes both coarse and so-called fine wares. The vessels had been originally set on the ground, below the frost line, and being exposed to rain, frost, winds and the scorching sun, their surface has been practically eroded. Owing to the vicissitudes of weather and the chemical processes in the soil, most vessel surfaces are strongly worn and the greater part of the coarse pottery became rather crumbly.[135] Only more prominent applied and

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[133] I am grateful to István Torma for this information. Unfortunately, I was unable to locate his manuscript in the Archives of the Archaeological Institute.

[134] For example, the jug from Grave 434 is decorated with vertical channelling to the right of the handle and oblique channelling which gradually grades into vertical channelling to the left of the handle *(Pl. 42. 7)*. A similar "botched" design can be seen on a mug from Grave 336 *(Pl. 1. 5)*.

[135] It is possible that the vessels placed in the graves were not taken from the household vessels, but were made specifically for the funeral in accordance with the community's traditions, and thus the goal was not the creation of carefully made, durable pottery, but rather the observation of the funerary customs.

impressed patterns have survived. No more than small patches remained of the polishing on fine wares and remnants of a red slip could be noted on the fragments of no more than two bowls *(Pl. 3. 1, Pl. 6. 4)*.

In the following, I shall discuss each vessel type with regard to their most important attributes (form, decoration, individual stylistic traits, etc.), but not their fabric, surface treatment, temper and colour in view of the above-mentioned general circumstances and, also, because these can be found in the Catalogue, where each grave good is described. I have also refrained from a detailed discussion of the various applied and incised or impressed ornamental motifs because, no matter how pleasing to the eye, they have little relevance for the analysis of the cemetery and its internal chronology.

The typological assessment of each vessel type is introduced by a general description of the type, followed by a reference to Torma's report, who provided the primary classification, and to the categorisation of the type in Němejcová-Pavúková's typological scheme.[136] If a particular vessel type has been discussed in greater detail in the archaeological literature, it will be reviewed in this section. Next, the vessel is assigned to a particular type alongside an overview of the most important analogies.[137]

The typochronological conclusions, the possible spatial patterns in the distribution of a particular artefact within the cemetery and the discussion of the rare, unusual finds are covered in the overall assessment of the cemetery.

In addition to the typochronological analysis, I am fortunate to have radiocarbon dates for thirteen graves, meaning that a considerable number of finds can be reliably dated. My primary goal when choosing the graves from which samples were to be submitted for radiocarbon dating was that they should contain as many artefact types as possible and that they should, as far as possible, be evenly distributed in the cemetery. My purpose was twofold: I wanted to have as many radiocarbon-dated finds as possible in addition to the typological sequence and I was also curious to learn whether there was a linearity to the burials. The results are presented in the section covering the cemetery's internal chronology. *Table 9* (on p. 246) offers an overview of the radiocarbon-dated vessel types. The vessel types are presented in type charts *(Figs 9–13)* and a reference to the charts accompanies the descriptions below. *Table 2* shows the distribution of each main vessel type according to how many graves they were found in and their overall number within the cemetery.

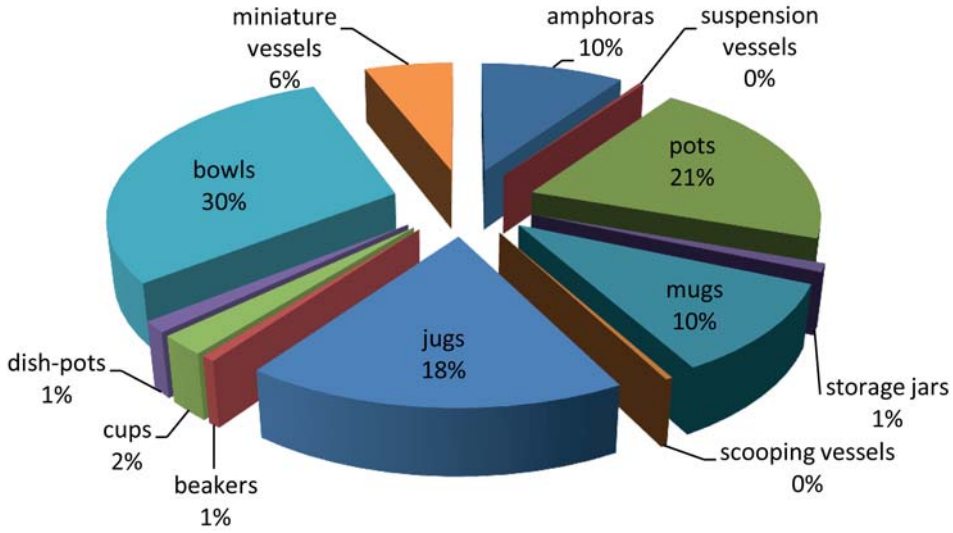
*Table 2* reveals that bowls were the most frequently deposited vessel type (265 pieces, 30%), followed by pots (98 pieces, 21%), jugs (74 pieces, 18%), mugs (42 pieces, 10%), amphoras (41 pieces, 10%) and various miniature vessels (20 pieces, 6%). The percentage distribution of the main types is shown in *Diagram 1*.

[136] As I have already argued elsewhere, I do not regard Němejcová-Pavúková's typological scheme as a master sequence of Baden pottery that can be used for classifying the vessels brought to light during an excavation (see the case study in relation to the assessment of the ceramic finds from a settlement: BONDÁR 2010). However, given that most archaeologists tend to use her typological system, I have included references to her scheme in my assessment of the vessels from the Pilismarót cemetery in order to indicate to which of her phases a vessel type could be assigned.

[137] The chronological position of the main sites from where counterparts of the vessels are quoted varies in the different periodisation schemes (see BONDÁR 2010, Table 4), and thus any dating on the strength of analogous finds is no more than a rough guideline.

*Table 2. Distribution of the main vessel types in the burials*

| Section | Vessel type | No. of graves | No. of vessels |
|---|---|---|---|
| 1. 1 | Amphora | 29 | 41 |
| 1. 2 | Pot | 61 | 95 |
| 1. 3 | Storage jar | 4 | 4 |
| 1. 4 | Mug | 32 | 42 |
| 1. 5 | Jug | 53 | 70 |
| 1. 6 | Cup | 2 | 3 |
| 1. 7 | Beaker/flowerpot-shaped vessel | 7 | 8 |
| 1. 8 | Scooping vessel | 1 | 1 |
| 1. 9 | Suspension vessel | 1 | 1 |
| 1. 10 | Dish-pot | 4 | 4 |
| 1. 11 | Bowl[19] | 91 | 265 |
| 1.11.1 | Conical (funnel-necked) bowl | (83) | (190) |
| 1.11.2 | Semi-spherical bowl | (57) | (75) |
| 1. 12 | Miniature vessels (pot, mug, cup, bowl, suspension vessel)[20] | 18 | 20 |
| 1. 13 | Clay spoon | 1 | 1 |
| | | | **Total: 561 vessels** (intact and fragmentary) |




**1. 1. Amphoras** *(Fig. 9)*

The basic vessel form is a short-necked vessel with rounded shoulders and biconical or ovoid body coming in various sizes, sometimes provided with handles and with decoration. Amphoras functioned as storage jars: one variety was more coarsely made, another is finer.

[138] Some graves contained several bowls and therefore the number of bowls assigned to the two main categories (conical and semi-spherical bowls) are shown in parentheses, while the main heading of Bowls shows the overall number.

[139] The number of miniature vessels and the number of burials they were recovered from are not included in the figures for the normal-sized vessels, but appear in the general category of miniature vessels.

Torma did not treat amphoras separately in his preliminary report, but included them among the larger biconical vessels with short neck or without a neck.[140] He distinguished two sub-types: vessels regularly decorated with a herringbone pattern and a cordon around the upper part,[141] provided with a handle or a knob as well as vertical ribs. He quoted comparable intact vessels from Celldömölk and Sárisáp. The other type is similar, with a squatter upper part and a longish, conical lower part.[142] This type is decorated with two or three cordons and vertical ribs extending to the lower part of the belly,[143] while the fields between the cordons are filled with alternating empty areas and zig-zag lines. Torma cited two similar vessels from Celldömölk, four urns from Fonyód and similar vessels from Pári.[144] He argued that the Fonyód type amphoras were later than the horizon marked by the sites of Jevišovice $C_1$, Nitriansky Hrádok and Celldömölk.[145]

Appearing as Types N and O in Němejcová-Pavúková's typological scheme, this vessel type had various derivatives spanning the period from Baden Ia to Baden III,[146] and the vessel also survived into Baden IV.[147]

Gabriel Nevizánsky devoted a separate study to the amphoras of the Baden culture and examined the typological traits (form, decoration, handles) of fifty-three vessels. He distinguished ten types in the Baden sequence and argued that the various types could be linked to a specific period. His Types I–II and VIII–X were typical for the Boleráz group, while Types IV–VII were common in the classical Baden period.[148] He quotes the amphoras from Graves 358 and 392,[149] assigning the former to his Type II, i.e. the Boleráz group[150] and quoting a vessel from Kopčany as an analogous find,[151] while no other mention is made of the amphora from Grave 392 in the subsequent part of his study. Nevizánsky's type chart illustrates the changes in amphora shapes from the Boleráz period (short-necked, squat vessels)[152] to the classical Baden phase (long-necked, slender, vase-like forms).[153]

Following the examination of the entire material of the Pilismarót cemetery, I assigned the amphoras recovered from the burials into several types, which correspond to Torma's two main categories regarding their typical traits.

Forty-one amphoras were recovered from twenty-nine burials at Pilismarót-Basaharc (Graves 338, 350, 351, 358, 361, 362, 364, 390, 392, 393, 399, 400, 409, 418, 420, 421, 424, 428, 430, 433, 434, 437, 444, 445, 449, 450, 453, 457, 458). Their mouth diameter ranges between 12–24 cm, their height between 23.5–38.5 cm.

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[140] TORMA 1973, 494.
[141] Corresponding to Type A5 amphoras.
[142] Corresponding to Type A1–A3 amphoras.
[143] This trait is typical for Type A4 amphoras.
[144] TORMA 1973, 494.
[145] TORMA 1977, 54.
[146] NĚMEJCOVÁ-PAVÚKOVÁ 1981, Obr. 1–5; NĚMEJCOVÁ-PAVÚKOVÁ 1984, Obr. 33–34 (type charts of the Baden Ia–Baden III vessels).
[147] ENDRŐDI 1997, Fig. 4. 3.
[148] NEVIZÁNSKY 2004, 72.
[149] NEVIZÁNSKY 2004, 59.
[150] NEVIZÁNSKY 2004, 61.
[151] ŠIŠKA 1966, Abb. 6. 8.
[152] NEVIZÁNSKY 2004, Abb. 1, 3.
[153] NEVIZÁNSKY 2004, Abb. 2.

*1. 1. 1. Undecorated amphoras*

None of amphoras from the Basaharc cemetery can be treated as obviously lacking any decoration. It is uncertain whether the plain body and base fragments come from decorated or undecorated vessels and these were not assigned to a specific type for this reason.

*1. 1. 2. Decorated amphoras*

Decorated amphoras can be classified according to the number of the decorative elements and their combination. The one-time decoration of the vessels could not always be determined from the fragments, and neither was there any way of knowing whether a particular vessels had been fitted with a handle or knobs. I distinguished six main types based on the intact or near-intact pieces.

1. 1. 2. 1. Amphora, Type 1 *(Fig. 9. A1)*

Short-necked, ovoid vessel decorated with a single finger-impressed or grooved cordon around the shoulder and a pair of handles opposite each other underneath *(Pl. 13. 1, Pl. 15. 8, Pl. 39. 9)*. The vessel's other parts are plain. Its maximum diameter is in the lower third. This type was recovered from three burials (Graves 358, 362, 424). The vessel from Grave 358 could be measured: H. 23.5 cm, dM. 13.5 cm, dB. 8.5 cm *(Pl. 13. 1)*.

This amphora type comes both with and without handles in other assemblages. The best analogy can be cited from Šturovo, which has been dated to the earliest Boleráz phase,[154] and it also occurs in the Boleráz material from Balatonőszöd.[155]

1. 1. 2. 2. Amphora, Type 2 *(Fig. 9. A2)*

Short-necked, biconical vessel decorated with a pair of finger-impressed or grooved cordons around the shoulder and small round knobs underneath as well as a pair of short handles on the belly. The belly is coarsened. The maximum diameter is roughly halfway down the vessel *(Pl. 2. 8, Pl. 20. 12, Pl. 23. 5, Pl. 26. 3, 8, Pl. 28. 1, Pl. 33. 9, Pl. 36. 3, 8, Pl. 38. 2, Pl. 40. 6, Pl. 42. 2, Pl. 46. 4, Pl. 47. 3, 8, Pl. 50. 11–12, Pl. 51. 11)*.

This type was recovered from fifteen burials (Graves 338, 392, 393, 399, 400, 409, 418, 420, 421, 433, 434, 444, 445, 453, 458). The vessel from Grave 392 was measurable: H. 25.5 cm, dM. 11.2 cm, dB. 9.3 cm *(Pl. 20. 12)*. The mouth diameter of the amphora from Grave 400 could be measured: 12 cm *(Pl. 28. 1)*.

This is by far the most common amphora type in the Pilismarót cemetery. It is best matched by an amphora from the Jevišovice $C_1$ site.[156] Several comparable amphoras with a double cordon around the shoulder could be cited, but this seems an unnecessary exercise.

1. 1. 2. 3. Amphora, Type 3 *(Fig. 9. A3)*

Slender, biconical vessel with short, incurving neck and outturned rim, decorated with a triple finger-impressed or grooved cordon around the shoulder and small round knobs underneath *(Pl. 51. 3)*. The maximum diameter is halfway down the vessel *(Pl. 22. 2)*. Variants with a handle were not identified in the material.

Only a single vessel could be confidently assigned to this type, the amphora from Grave 390, whose dimensions are as follows: H. 40 cm, dM. 15–16 cm, dB. 12.5 cm. A vessel fragment with a triple cordon from Grave 457 *(Pl. 51. 3)* perhaps comes from a more elaborately decorated amphora.

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[154] Němejcová-Pavúková 1979, Obr. 6. 3 and Obr. 10. 1.
[155] Horváth 2012a, Fig. 15. 7.
[156] Medunová-Benešová 1981, Taf. 67. 2.

Good analogies to Type 3 have been published from Žlkovce,[157] Jevišovice $C_1$[158] and Mostonga,[159] all dating from the Boleráz period (corresponding to Baden Ia-c in Němejcová-Pavúková's system). Torma quoted the amphora from Grave 390 as a good counterpart of an amphora from Pári.[160] The type is attested in the ceramic material from Balatonőszöd and was assigned to the basic vessel types of the Boleráz period by Tünde Horváth.[161]

1. 1. 2. 4. Amphora, Type 4 *(Fig. 9. A4)*

This type was distinguished on account of its decorative scheme that differs from the ornamentation of the above amphoras. This amphora type is a large, short-necked, thick-walled vessel with slightly outturned rim, decorated with a triple cordon around the neck and bundles of vertical ribs running from the shoulder to the belly, dividing the vessel body into fields *(Pl. 40. 5)*. Fragments of two vessels from Graves 433 and 450 represent this type, the latter coming from a smaller vessel *(Pl. 48. 11)*. Neither vessel could be fully reconstructed.

The division of the vessel body into fields with vertical, finger-impressed ribs is uncommon among the Boleráz amphoras, and an exact counterpart of this vessel is not known. Vessels with the shoulder divided into fields filled with various ornamental motifs flanked by plain, slender ribs are assigned to the Baden Ic, IIa, IIb periods in Němejcová-Pavúková's system.[162]

1. 1. 2. 5. Amphora, Type 5 *(Fig. 9. A5)*

The vessel body resembles that of the amphoras assigned to Type 2: a short-necked, ovoid form, with the maximum diameter halfway down the vessel, where the two handles are set. It is decorated with a triple row of punctates or a triple grooved cordon around the neck and a zig-zag pattern covering the greater part of the vessel body. This combination of decorative elements occurs frequently on pots and storage jars too, usually arranged in a horizontal band. A single vessel from Grave 390 could be assigned to this type at Pilismarót; however, on this vessel, unlike on the others, the zig-zag pattern runs vertically *(Pl. 22. 1)*.

Comparable vessels have a wide distribution. Similar vessels are known from Jevišovice $C_{1,}$[163] and fragments from a closely matching vessel have been published from Blatné[164] as well as from Malá nad Hronom (recovered from a burial),[165] Brza Vrba[166] and Arbon-Bleiche 3.[167] A slightly more ovoid form has been found at Sárisáp, probably originating from a burial.[168] The incised zig-zag pattern runs horizontally on these vessels. A vertical zig-zag pattern adorns an amphora in the Boleráz material from Balatonőszöd.[169] One of the best parallels to the Pilismarót amphora comes from Hlinsko: similarly to the piece from Pilismarót, its body is covered with a vertically incised pattern.[170] An amphora with a

[157] Němejcová-Pavúková 1984, Obr. 20. 13.
[158] Medunová-Benešová 1981, Taf. 67. 1.
[159] Karmanski 1970, Vol. I. Taf. VII. 1.
[160] Torma 1977, 54.
[161] Horváth 2011, 20; Horváth 2012a, Fig. 12, 4.
[162] Němejcová-Pavúková 1981, Baden IIa: Obr. 3. Type O2, Baden IIb: Obr. 4. Type O2; Němejcová-Pavúková 1984, Baden Ic: Obr. 33. Type O4–7.
[163] Medunová-Benešová 1981, Taf. 67. 4.
[164] Němejcová-Pavúková 1984, Obr. 3. 6, 9–11, 13–14, 21–24.
[165] Nevizánsky–Ožďani 1997, Taf. 3. 4.
[166] Medović 1976, Taf. X. 7.
[167] Capitani–Leuzinger 1998, Taf. 2. 7 and Capitani–Leuzinger 2001, 731, Abb. 7. 1.
[168] MRT 5, Pl. 6. 12.
[169] Horváth 2011, Fig. 15. 8.
[170] Furholt 2009, Taf. 27. 16.

like decoration is known from Arbon-Bleiche.[171] Amphoras adorned with horizontal or vertical zig-zag motifs have been found both at this site and at Hlinsko, and there is no apparent chronological difference between them. The vessel type is attested at Balatonőszöd too.[172]

István Torma pointed out to me that the zoomorphic vessel from Vác-Liliom utca could be regarded as an amphora if it lacked the animal head on the neck and the cattle tail.[173] True enough, if these elements are disregarded, we are left with a vessel resembling a Type 5 amphora decorated with vertical zig-zag lines on the belly,[174] which, in view of the accompanying finds, was dated to the middle Boleráz period by Klára Kővári.[175]

1. 1. 2. 6. Amphora, Type 6: Breast pots *(Fig. 9. A6)*

One remarkable group among the amphoras is made up of breast pots, which can be considered as human representations. The female breasts are symbolised by solid knobs or hollow knobs pressed out from the vessel interior on the shoulder or the upper part of the belly, whereby the vessel alludes to the human body.

This amphora type is Type O3 in Němejcová-Pavúková's system and is derived from Types O1–2, which lack a longish cylindrical neck. A vessel with a similar decoration as the one from Pilismarót appears in Baden Ib in her type charts.[176] The constricted mouth is plain, a triple finger-impressed cordon encircles the neck, the vessel body is coarsened in some spots and is decorated with semi-circular ribs.[177]

Six fragments of a breast pot were recovered from Grave 351, one of which was adorned with the typical decoration of a pair of slender, grooved cordons around the shoulder and one of a pair of solid pointed knobs underneath, with a semi-circular grooved rib around each knob that adjoined the double cordon *(Pl. 9. 1)*.[178]

Vessels resembling the broken breast pot from Pilismarót with solid knobs symbolising the breasts and a pair of semi-circular ribs framing the knobs are known from Brza Vrba,[179] Brno-Líšen,[180] Hács,[181] Hlinsko,[182] Jevišovice C1,[183] Koroncó,[184] Pári,[185] Šalov,[186] Szólád[187] and Tiszalúc-Sarkadpuszta.[188] The vessels from these sites all have a prominent circular (Brno-Líšen) or semi-circular rib (Brza Vrba, Jevišovice $C_1$, Hács, Hlinsko, Koroncó, Pári, Šalov, Szólád), while the vessel from Tiszalúc has a triple rib around the breasts. Only the neck and the area of the breasts were decorated on the fragments from Hács and Szólád. The amphora from Brza Vrba had an otherwise plain body, while the fragment from Koroncó was richly adorned with a horizontal herringbone pattern, as was the vessel from Hlinsko. The

[171] Capitani–Leuzinger 1998, Taf. 2. 5.
[172] Horváth 2011, Fig. 15 8.
[173] I am grateful to István Torma for pointing this out to me.
[174] Kővári 2010, Figs 4–6.
[175] Kővári 2010, 391.
[176] Němejcová-Pavúková 1981, Baden Ib. Obr. 2. 3.
[177] It must here be noted that not all amphoras decorated with semi-circular ribs can be regarded as breast pots. For a detailed discussion, see Bondár 2002 and Bondár 2002a.
[178] Torma 1973, 508; Bondár 2002, Fig. 2. 6.
[179] Bondár 2002, Fig. 1. 6.
[180] Bondár 2002, Fig. 4. 2.
[181] Bondár 2002, Fig. 3. 2.
[182] Bondár 2002, Fig. 3. 3.
[183] Bondár 2002, Fig. 4. 1.
[184] Bondár 2002, Fig. 2. 4.
[185] Bondár 2002, Fig. 2. 6.
[186] Bondár 2002, Fig. 2. 2.
[187] Bondár 2002, Fig. 6.
[188] Bondár 2002, Fig. 2. 3.

quoted vessels illustrate how each amphora type could be transformed into human depictions if female traits were added.

1. 1. 2. 7. Indeterminate amphoras

The indistinct body fragments of amphoras, pots and storage jars can only be assigned to one or another vessel type based on the practical experience gained from the personal handling of the period's pottery. Given that these fragments *(Pl. 7. 4, Pl. 14. 9, Pl. 15. 5, Pl. 16. 10, Pl. 20. 11, Pl. 50. 13)* could equally well have come from any of these vessel types, they were not included in the typological analysis. Likewise, it was virtually impossible to determine which type the handled fragments came from *(Pl. 8. 2, Pl. 37. 6, Pl. 41. 2, 10, Pl. 45. 12, Pl. 47. 5–6, Pl. 48. 12)*, and therefore these were not assigned to a particular type either.

Boleráz amphoras are generally narrow-mouthed, slightly squat biconical vessels with rounded carination, with a short neck or without a neck, that often have two loop handles set on or near the vessel's maximum diameter. They are decorated with a combination of a few ornamental elements (one or more grooved or impressed cordons, tiny knobs, herringbone or zig-zag patterns). Very few intact pieces have been published and thus the number of comparable vessels is relatively low.

Amphoras were widely distributed and have been recovered from settlements and burials alike.

The amphora types found at Pilismarót-Basaharc can be assigned to the Boleráz group, as confirmed also by the similar vessels found in well-datable contexts. They can be assigned to the Baden Ia-Ic period in Němejcová-Pavúková's scheme, with some basic forms surviving into later periods.

### 1. 2. Pots *(Fig. 10)*

Pots are biconical vessels with coarsened surface and elongated S profile, decorated with one, two or three cordons and occasionally with knobs. Variants with two handles set on the rim are also encountered, as are vessels lacking handles. Some are richly decorated, others are plain. Pots can rarely be used as chronological anchors because their form was based on practical considerations and changed little over the centuries. However, the pots of the Baden culture underwent significant changes during the culture's successive periods.

In his preliminary report, Torma wrote briefly about this vessel type. He described them as fairly popular vessels with slightly outturned rim, decorated with double or triple finger-impressed or grooved cordons, sometimes with a pair of handles set on the rim, and often provided with an unperforated lug. He cited pots with knobs underneath the rim from the Slovakian material. He also noted that the vessel body is frequently covered with a herringbone pattern.[189]

In his study on the Pári settlement, he devoted a separate section to the pots of the Boleráz group and noted that there was a chronological difference between the vessels from earlier Boleráz sites (such as Nitriansky Hrádok and Pilismarót-Basaharc) and the ones from Pári. He distinguished the types typical for the successive phases of the Boleráz period on the basis of the ornamental elements and the extent to which the vessel body was decorated.[190] In his view, Boleráz pots were characterised by triple finger-impressed cordons under the rim (e.g. Nitriansky Hrádok and Pilismarót-Basaharc) as well as by double cordons, while the variant with a single cordon under the rim, the most common type at Pári, pointed

[189] Torma 1973, 491–492.
[190] Torma 1977, 48–49.

towards the ensuing Baden period. In his view, the dense zig-zag patterns covering the vessel body were another hallmark of Boleráz pots.[191]

Pots appear in virtually unchanged form, although with different decorations from Baden Ia to Baden III in Němejcová-Pavúková's type charts.[192] She too noted that the pots of the Boleráz period were typically decorated with multiple cordons under the rim, handles set on the rim and lavish patterns on the body, while the vessels of the later periods (from Baden II onwards) had a single cordon or a row of stabs under the rim and knobs rather than handles, while the rich decoration of the vessel body was replaced by incised motifs.

Sixty-one graves yielded ninety-five pots as part of the grave inventory in the Pilismarót-Basaharc cemetery (Graves 338, 339, 344, 346, 347, 347/a, 348, 349, 351, 353, 354, 355, 356, 357, 358, 360, 361, 362, 363, 364, 382, 384/a, 385, 388, 389, 390, 391, 393, 394, 395, 396, 398, 399, 401, 402, 405, 409, 411, 413, 414, 416, 418, 419, 422, 423, 432, 433, 434, 435, 436, 442, 445, 447, 448, 450, 451, 452, 453, 454, 455, 457). The measurable vessels indicated that their mouth diameter ranges between 11–30 cm, their height between 8–17.5 cm and their base diameter between 4.5–8.5 cm.

Several pot types could be distinguished in the ceramic inventory from the burial ground. The basic form is more or less identical, but the ornamentation and the combination and placement of the decorative elements show significant variations. Some pots are decorated on their rim or upper third, some variants on the upper and middle third, while some have no more than a few knobs as decoration. I distinguished six main types based on these traits.

*1. 2. 1. Pot, Type 1 (Fig. 10. P1)*

This pot type, decorated with a row of stabs, punctates or fingertip impressions on or under the rim and two symmetrically set handles on the rim, but an otherwise plain body *(Pl. 5. 4, Pl. 14. 13, Pl. 21. 12, Pl. 22. 4, Pl. 29. 2, Pl. 28. 9, Pl. 36. 1–2, 4, Pl. 39. 3, Pl. 40. 10, Pl. 46. 8, Pl. 47. 4)* or coarsened body *(Pl. 26. 1, Pl. 43. 7)*, was recovered from thirteen burials (Graves 344, 347, 363, 390, 393, 401, 405, 418, 423, 433, 442, 445, 447). In some cases, it could not be determined whether or not the vessel fragment came from a handled pot *(Pl. 3. 11, Pl. 14. 13, Pl. 21. 12, Pl. 22. 4, Pl. 26. 1, Pl. 28. 9, Pl. 29. 2)*. The measurable vessels have a height ranging between 8–17.5 cm, a mouth diameter between 11–18 cm and a base diameter between 4.5–6.5 cm *(Pl. 46. 8, Pl. 5. 4)*. A miniature variant was also recovered (Grave 451, *Pl. 48. 15)*.

This pot type appeared towards the end of the Boleráz period, in Němejcová-Pavúková's Baden Ic–IIa, represented by the sites at Pári, Malá nad Hronom and Tekovský Hrádok.[193]

*1. 2. 2. Pot, Type 2 (Fig. 10. P2)*

This pot type, decorated with one *(Pl. 23. 2, Pl. 25. 9, 18, Pl. 27. 2, 9–10, Pl. 29. 11, Pl. 34. 7, Pl. 42. 12–13, Pl. 50. 3, 15, 18)* or two slender, finger-impressed cordons *(Pl. 2. 7, Pl. 3. 5, Pl. 13. 6, Pl. 15. 2, Pl. 16. 3, Pl. 27. 11, Pl. 24. 1, Pl. 32. 7, Pl. 33. 6, Pl. 35. 8, Pl. 38. 7, Pl. 39. 6, Pl. 48. 4, 9, Pl. 51. 9)* and two short handles attached at the rim, was recovered from twenty-four burials (Graves 338, 339, 358, 362, 364, 390/a, 391, 395, 396, 398, 399, 402, 409, 411, 414, 416, 422, 423, 435, 448, 450, 453, 454, 457). Some pieces are decorated with small knobs *(Pl. 13. 6)*. Only fragments of this pot type were recovered. One measurable vessel had a height of 13.5 cm, a mouth diameter of *ca.* 28 cm and a base diameter of 10 cm *(Pl. 25.9)*.

[191] Torma 1977, 49.
[192] Němejcová-Pavúková 1981, Obr. 1–4; Němejcová-Pavúková 1984, Obr. 11, Obr. 33, Type P.
[193] Torma 1973, 49.

In some cases, the surviving vessel fragments provide no indication of whether they come from handled or handleless pots *(Pl. 3. 5, Pl. 16. 3, Pl. 29. 11, Pl. 33. 6, Pl. 34. 7, Pl. 35. 8, Pl. 38. 7, Pl. 39. 6, Pl. 42. 12–13, Pl. 50. 18)*.

*1. 2. 3. Pot, Type 3 (Fig. 10. P3)*

This pot type, with both a sparsely decorated variant with small round knobs on the belly *(Pl. 10. 12, Pl. 13. 2, Pl. 34. 2)* and a plain variety *(Pl. 6. 5, Pl. 10. 9, Pl. 25. 12, Pl. 29. 8, Pl. 42. 8, Pl. 43. 9, Pl. 48. 17, Pl. 50. 1)*, was recovered from ten burials (Graves 349, 355, 358, 394, 402, 413, 434, 442, 451, 453). The measurable vessels had a height of 4.6–5 and 10–10.8 cm, a mouth diameter of 5 and 12.8 cm, and a base diameter of 2.4 and 6 cm, respectively *(Pl. 42. 8, Pl. 13. 2)*. Two miniature variants were recovered from Grave 457 *(Pl. 51. 6–7)*.

Pots of Types 2–3 are known from several sites, for example from Šturovo,[194] the Boleráz levels of Nitriansky Hrádok,[195] Radošina,[196] Blatné,[197] Mostonga,[198] Lánycsók,[199] Gyöngyöshalász,[200] Battonya,[201] Nagyút-Göbölyjárás[202] and Somlóhegy.[203] The fragment from the latter site is decorated with a row of stabs under the rim and small round knobs underneath. The handle has finger-drawn decoration and is grooved. Comparable pieces have also been reported from Balatonőszöd.[204] It is often difficult to assign a particular fragment to a typochronological horizon because these types were used over a longer period of time.

*1. 2. 4. Pot, Type 4 (Fig. 10. P4)*

This type was attested in four burials only (Graves 358, 388, 402, 423). I assigned the thin-walled pots decorated with vertical zig-zag lines to this type *(Pl. 13. 7, Pl. 39. 7)*; however, in some cases it was impossible to determine whether or not a fragment came from a handled vessel *(Pl. 21. 4, 9, Pl. 29. 6)*. Grave 358 yielded a partly measurable vessel: H. 10.5 cm, dM. 14.5 cm *(Pl. 13. 7)*.

*1. 2. 5. Pot, Type 5 (Fig. 10. P5)*

This type was recovered from five burials (Graves 391, 409, 411, 451, 455). The pots assigned to this type are thin-walled vessels decorated with a horizontal zig-zag pattern *(Pl. 50. 23)*; however, in some cases, it was impossible to determine whether a fragment came from a handled pot *(Pl. 25. 5, Pl. 32. 5–6, 9, Pl. 33. 2–4, Pl. 48. 16)*. A measurable pot of this type, recovered from Grave 455 *(Pl. 50. 23)*, has a mouth diameter of 8.5 cm, a height of 6 cm on one side and 7 cm on the other, and a base diameter of 3.6 cm. Miniature versions of the type were recovered from Graves 361, 391, 405, 416 *(Pl. 14. 6, Pl. 25. 2, Pl. 28. 7, Pl. 35. 10)*.

[194] Němejcová-Pavúková 1979, Obr. 2. 15, Obr. 6. 1, Obr. 8. 13.
[195] Němejcová-Pavúková 1964, Obr. 22. 7–8, 17.
[196] Němejcová-Pavúková–Bárta 1977, Abb. 5. 13, 16.
[197] Němejcová-Pavúková 1984, Obr. 4. 12–13, Obr. 5. 10, 12–13.
[198] Karmanski 1970, Vol. I, Taf. V. 1.
[199] Ecsedy 1978, Taf. 10. 3.
[200] Szabó 1983, Pl. I. 8, Pl. VIII. 3, Pl. IX. 9.
[201] Bondár et al. 1998, Fig. 9. 4.
[202] Bondár 2010, Fig. 3. 2, 4, Fig. 4. 8, Fig. 5. 5, 12, Fig. 6. 2, 7, 8–9, Fig. 8. 3, 10, Fig. 10. 4, 15–16, Fig. 19. 2–3, 9, Fig. 20. 14, 19, Fig. 21. 1, Fig. 22. 1, Fig. 23. 11, Fig. 25. 2, Fig. 26. 2, 6, Fig. 27. 2, 10, Fig. 28. 2, 16, Fig. 29. 9–10, Fig. 30. 6, 10, Fig. 31. 8, Fig. 33. 8, 9, Fig. 35. 6.
[203] MRT 3, Fig, 58. 6.
[204] Horváth 2012a, Fig. 47. 5–6.

*1. 2. 6. Pot, Type 6 (Fig. 10. P6)*

This variant was recovered from three burials (Graves 357, 382, 385). All are thick-walled, larger vessels whose body is covered with vertical herringbone motifs *(Pl. 11. 5, Pl. 17. 11)*. A similar decorative scheme adorns the amphoras of Type A5, although with vertical zig-zag lines instead of herringbone motifs.

The fragments were unsuitable for determining whether they came from handled pots. Two fragments from thick-walled pots *(Pl. 17. 12, Pl. 19. 4)* on which the decorative motif cannot be made out clearly, but was perhaps a zig-zag pattern, are also assigned to this type; it is also unclear whether they came from handled pots. This type did not include measurable vessels.

Pots with richly decorated body (Types 4–6) have a similar basic form with an elongated S profile, a conical body and a short handle attached to the rim. Their decoration, however, is richly varied. One shared trait is the single or multiple decorated cordon under the rim, while the differences are apparent in the incised patterns (herringbone motifs, zig-zag lines, etc.) and the size of the decorated area. Some vessels have their entire body covered with decorative patterns, others only have a single ornamented band. The lower third is plain on all pot types. Some of the fragments assigned to a particular type provide no clues as to whether it came from a handled or handleless pot.

The richly decorated Type 4–6 pots are attested from the Baden Ib phase,[205] and they remained in use during the Baden Ic[206] and Baden IIa–III phases too.[207] Good parallels to the pots from Pilismarót-Basaharc can be quoted from Szeghalom-Dióér,[208] Pári,[209] the Boleráz levels of Nitriansky Hrádok,[210] Blatné,[211] Žlkovce[212] and the Nagyút-Göbölyjárás II site.[213] Curiously, there were no counterparts of these pot types in the enormous settlement material from Balatonőszöd. The analogies suggest that these types were more popular during the middle phase of the Boleráz period (Baden Ib).

*1. 2. 7. Indeterminate pots*

Several plain body and base fragments could not be assigned to a particular type because they could come from any of the above types *(Pl. 3. 10, Pl. 5. 10, Pl. 6. 3, 7, Pl. 7. 12, Pl. 8. 6, Pl. 9. 11, Pl. 10. 8, 10, Pl. 11. 2, Pl. 14. 2, 4–5, 18, Pl. 15. 7, Pl. 18. 6, Pl. 20. 10, Pl. 37. 1, Pl. 43. 1, Pl. 49. 4)*.

The pots uncovered at Pilismarót-Basaharc represent wares of the Boleráz group and their use can be traced from the Baden Ia to the Baden III period. The earliest types are richly ornamented, while later periods are characterised by sparsely decorated pots with a single cordon under the rim.

### 1. 3. Storage jars *(Fig. 10)*

The basic form is a wide-mouthed biconical vessel with cylindrical neck and a wide handle on the shoulder or the belly. The neck is smoothed, the body is coarsened. Some are plain, others have a single

[205] Němejcová-Pavúková 1981, Obr. 2. Type P1–2.
[206] Němejcová-Pavúková 1984, Obr. 34. Type P a, c-e
[207] Němejcová-Pavúková 1981, Obr. 3. Type P1–2, Obr. 4. Type P2–4, Obr. 5. Type P2.
[208] Ecsedy 1973, Taf. XIII. 14.
[209] Torma 1977, Fig. 6. 1.
[210] Němejcová-Pavúková 1964, Obr. 22. 13.
[211] Němejcová-Pavúková 1984, Obr. 5. 11, Obr. 8. 5–6.
[212] Němejcová-Pavúková 1984, Obr. 24. 6, 11, Obr. 26. 13, 16–17, Obr. 28. 9, 13, Obr. 30. 4–6, 8, 15, Obr. 32. 14–16.
[213] Bondár 2010, Fig. 4. 11, Fig. 8. 2, Fig. 10. 8, Fig. 28. 8.

or a double finger-impressed cordon around the shoulder. This vessel type is generally regarded as a storage jar in terms of its function.

Torma did not discuss this type separately. In Němejcová-Pavúková's system, the vessel type is attested in Baden Ib-Ic.[214]

Fragments of four storage jars were recovered from four burials at Pilismarót-Basaharc (Graves 341, 384, 399, 415). Two were almost intact, the third is a handle fragment. Two types could be distinguished.

*1. 3. 1. Storage jar, Type 1 (Fig. 10. SJ1)*

The storage jar from Grave 384 is a plain, wide-mouthed, biconical vessel with two short handles on the belly *(Pl. 18. 4)*. H. 19.5 cm, dM. 22.7 cm, dB. 11 cm.

*1. 3. 2. Storage jar, Type 2 (Fig. 10. SJ2)*

The storage jar recovered from Grave 399 is a wide-mouthed biconical vessel decorated with a pair of grooved cordons around the shoulders and a doubly-furrowed strap handle on the belly *(Pl. 24. 7)*. H. 27.5 cm, dM. 33.5 cm, dB. 10 cm.

*1. 3. 3. Indeterminate storage jars*

The two thick loop handles from Graves 341 and 415 *(Pl. 4. 9, Pl. 35. 4)* come from storage jars, whose type could not be determined.

Good analogies to the storage jars from Pilismarót can be cited from Šturovo[215] and Lánycsók, dating from the early Boleráz period.[216] Other comparable vessels have been reported from Blatné,[217] Žlkovce[218] and Sárisáp.[219]

No more than a few fragments could be assigned to this vessel type in the ceramic assemblage from Nagyút-Göbölyjárás,[220] and the same holds true for the enormous settlement material brought to light at Balatonőszöd:[221] Horváth described the similar vessels from that settlement as large, cauldron-like storage vessels. However, none of the types on her *Fig. 51* resemble the storage jars from Pilismarót.

It would appear that storage jars, which one would expect to be a standard vessel of every household, were not as frequent as one might think and that it was more typical for early Boleráz sites.

## Mugs and jugs

The widely used mugs, jugs and pitchers of the Baden culture are distinguished by their size and perhaps by their function, rather than by their form. Taking ethnographic categories as a starting point, I assigned vessels standing between 5–9.9 cm tall to the category of mugs, those between 10–15 cm to jugs and those taller than 16 cm to pitchers. The ceramic inventory from the Pilismarót-Basaharc cemetery did not include pitchers. Mugs and jugs are treated separately, and I have indicated if a particular mug type has a jug correlate.

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[214] Němejcová-Pavúková 1981, Obr. 2; Němejcová-Pavúková 1984, Obr. 11, Obr. 33. Type K1–2.
[215] Němejcová-Pavúková 1979, Obr. 5, 6.
[216] Ecsedy 1978, Taf. 10. 1, 4.
[217] Němejcová-Pavúková 1984, Obr. 6. 19.
[218] Němejcová-Pavúková 1984, Obr. 24. 7, 10, Obr. 32. 9.
[219] MRT 5, Pl. 6. 13.
[220] Bondár 2010, Fig. 10. 5, Fig. 19. 4, Fig. 21. 7, Fig. 23. 10.
[221] Horváth 2011, 38, Fig. 51, Horváth 2012a, Fig. 51.

### **1. 4. Mugs** *(Fig. 11)*

The basic form is a short-necked, slightly squat, globular vessel with outturned rim and a curved, often furrowed strap handle rising above the rim and attached at the bottom to the belly. Plain and decorated varieties are known from both settlements and burial grounds.

In his preliminary report, Torma wrote briefly about mugs and distinguished two main types: the first, an almost neckless globular vessel with a strap handle decorated with channelling on the belly, represented by the pieces from Graves 336, 360 and 406, the other a vessel with short, cylindrical neck and squat, globular body, represented by fragments only, which closely match the mugs from Pári.[222]

In Němejcová-Pavúková's type charts, mugs and jugs are part of the same series, appearing from Baden Ia.[223] The formal variants and their ornamentation became more diverse during the Boleráz period, with the highest number of mug and jug varieties found in the type chart for the Ic period.[224] These vessels can be practically found on all Baden sites.

The mugs of the Baden culture have a wide variability regarding various types. They can be found during the culture's entire duration, although with changes in their body proportions, handle forms and ornamentation. Němejcová-Pavúková regarded handles as important elements in tracing the connections between the Baden culture and the Aegean.[225]

The Pilismarót-Basaharc cemetery yielded forty-two mugs or their fragments from thirty-two burials (Graves 336, 338, 339, 340, 343, 344, 348, 353, 354, 358, 359, 360, 361, 365, 386, 389, 392, 393, 395, 402, 403, 406, 407, 408, 412, 426, 431, 439, 441, 444, 448, 453). Their height ranges between 5–9 cm, their mouth diameter between 4.5–8.5 cm and their base diameter between 1.8–4.6 cm.

I distinguished seven types in the Pilismarót material. Although this number might seem high, it is justified because the mugs placed in the burials were not average, commonly used pieces – it would appear that less frequent types were chosen for deposition among the grave offerings.

#### *1. 4. 1. Mug, Type 1 (Fig. 11. M1)*

This type is represented by two plain mugs in the ceramic inventory, recovered from Graves 339 and 408 *(Pl. 3. 4, Pl. 31. 10)*. One measurable vessel had a height of 9.5 cm, a mouth diameter of 8.9 cm and a base diameter of 4 cm *(Pl. 31. 10)*. It does not have a jug variant.

#### *1. 4. 2. Mug, Type 2 (Fig. 11. M2)*

This type, a squat, globular vessel with slightly outturned rim and short, cylindrical neck, was recovered from a single burial (336). Its distinguishing trait is a decoration of sets of barely prominent slender ribs dividing the belly into symmetric fields *(Pl. 1. 6)*. The mug is plain save for the ribs. Its jug variant was not attested in the ceramic inventory.

#### *1. 4. 3. Mug, Type 3 (Fig. 11. M3)*

This mug type, a squat, globular vessel with short, cylindrical neck and slightly outturned rim, was recovered from four burials (Graves 343, 344, 439, 448). Their decoration is made up of bundles of three slender ribs dividing the vessel body into fields that are filled with channelling in alternating directions and three symmetrically set vertical subcutaneous handles (one opposite the strap handle and one to its

[222] Torma 1973, 492–493.
[223] Němejcová-Pavúková 1981, Obr. 1. Type G1–2.
[224] Němejcová-Pavúková 1984, Obr. 33. Type G1–16.
[225] Němejcová-Pavúková 1991, 71–76.

right and left) *(Pl. 5. 2, 5, Pl. 44. 1, Pl. 48. 2)*. The vessel heights range between 7–11 cm, the mouth diameters between 6.5–9 cm, the base diameters between 3.2–4.5 cm. Its jug variant was not attested.

*1. 4. 4. Mug, Type 4 (Fig. 11. M4)*

This type differs from Type 3 in that it has one subcutaneous handle less. The mugs assigned to this variant were recovered from four burials (Graves 338, 340, 353, 444). The vessel body is divided into fields by bundles of vertical triple ribs, the fields are filled with oblique or vertical channelling *(Pl. 2. 3, Pl. 4. 1, 4, Pl. 7. 9, Pl. 46. 6)*. The height of the measurable pieces ranges between 5.8–9.5 cm, the mouth diameter between 5.5–8 cm and the base diameter between 2.2–4 cm. Its jug variant (Type J2) is also attested in the find material.

*1. 4. 5. Mug, Type 5 (Fig. 11. M5)*

This type differs from Type 3 regarding a single decorative element, the lack of vertical ribs. Mugs of this type were recovered from two burials (Graves 412, 441). These mugs have vertical subcutaneous handles and are decorated with channelling in alternating directions arranged in fields *(Pl. 31. 2, Pl. 44. 7)*. Their height is 10 cm, their mouth diameter is between 8.4–8.5 cm and their base diameter is 4–4.2 cm. The jug variant (Type J3) is also attested in the material.

*1. 4. 6. Mug, Type 6 (Fig. 11. M6)*

This variety was recovered from six burials (Graves 336, 358, 393, 407, 408, 426). These mugs are decorated with vertical and/or oblique channelling in alternating directions on the shoulder and the belly *(Pl. 1. 3, 5, Pl. 9. 19, Pl. 13. 4, Pl. 26. 2, Pl. 31. 3, 5)*. Their height ranges between 4.5–6.5 cm, their mouth diameter between 5–6.8 cm and their base diameter between 2.3–3.3 cm. The jug variant (Type J4) is also attested in the ceramic inventory from the cemetery.

*1. 4. 7. Mug, Type 7 (Fig. 11. M7)*

This type is a squat, globular vessel with slightly incurving neck, decorated with three symmetrically set, vertical subcutaneous handles and a lobed body created by pressing ribs out from the vessel interior. The fields between the lobes and/or the lobes are covered with vertical or oblique channelling *(Pl. 14. 3, Pl. 17. 8, Pl. 19. 9).* One vessel has bundles of three vertical channelled lines instead of subcutaneous handles *(Pl. 32. 3)*. This variant is known from four burials (Graves 360, 365, 386, 406). Their height ranges between 6–7.5 cm, their mouth diameter between 5.5–7.3 cm and their base diameter between 2.5–3.5 cm. A larger variant, classified under the jugs (Type J5), is also attested.

*1. 4. 8. Indeterminate mugs*

Several fragments could not be assigned to a particular mug type *(Pl. 5. 9, 11, Pl. 7. 10, Pl. 9. 12, 17, Pl. 12. 3, Pl. 14. 8, Pl. 20. 9, 13, Pl. 25. 16–17, Pl. 29. 9, Pl. 30. 1, Pl. 31. 7, Pl. 41. 11, Pl. 50. 5–6)*. The pottery from Pilismarót also includes two miniature versions, recovered from two burials *(Pl. 45. 1, Pl. 46. 2)*.

Counterparts to the Pilismarót mugs can be quoted from almost all the currently known sites of the Boleráz group. However, these include few intact (or refitted) vessels. Good analogies to Type 5 can be

quoted from Lánycsók[226] and Balatonőszöd,[227] while a mug from Grave 15/83 at Malá nad Hronom[228] matches Type 6.

### 1. 5. Jugs *(Fig. 11)*

Jugs have the same forms and ornamentation using combinations of the same decorative elements as mugs, differing from the latter only in terms of their size.

Torma briefly discussed the most distinctive typological traits of jugs and their chronological implications.[229] The jugs from Pilismarót-Basaharc have a short, conical neck and globular belly, and they are generally adorned with cordons combined with subcutaneous handles underneath, and a channelled line encircling the neck. The jugs from the burial ground are often decorated with oblique channelling in fields flanked by bundles of three vertical ribs or channelled lines. The jugs from Pári, a site dating from the end of the Boleráz period, have their decoration arranged in fields separated by a single vertical rib, to which Torma cited the jug from Grave 338 at Pilismarót as a remarkably good parallel.[230]

Němejcová-Pavúková's system has several jug variants from the Baden Ia to the Baden III phase.[231] Similarly to mugs, one major difference between the jugs assigned to different phases is the form of the handle. According to her, the handles of the early period spring from the rim, but do not rise above the rim. The Baden IIa phase saw the appearance of handles rising slightly above the rim,[232] while the typical handle of the Baden IIb peaks slightly above the rim.[233] This phase also marked the appearance of high-swung strap handles with an elegant curve rising above the rim,[234] which survived well into the Baden III period.

Němejcová-Pavúková discussed vessel handles in several studies: she regarded certain handle forms and channelled decoration as evidence for the Baden culture's southern origins and for its contemporaneity with various cultures.[235] Although her view is no longer accepted, this issue shall not be treated at length here; however, what must be noted is that there are clear typological differences between the form and ornamentation of Boleráz and classical Baden mugs and jugs, which Němejcová-Pavúková had correctly noted and described, even if her typological scheme based on these differences is no longer acceptable in all respects.

Seventy jugs were recovered from fifty-three burials at Pilismarót-Basaharc (Graves 336, 337, 338, 349, 351, 352, 353, 358, 362, 364, 365, 382, 384/a, 385, 386, 387, 388, 389, 396, 399, 400, 401, 402, 403, 406, 408, 409, 415, 416, 419, 422, 424, 426, 427, 428, 430, 433, 434, 435, 436, 439, 440, 442, 444, 445, 447, 448, 452, 453, 454, 456, 457, 458). Their height ranges between 10–15 cm, their mouth diameter between 6.5–14 cm and their base diameter between 4–6 cm. Grave 390 yielded jugs decorated in the *Furchenstich* style, which will be discussed separately below.

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[226] Ecsedy 1978, Taf. 10. 3 = Taf. 11. 2.

[227] Tünde Horváth designates this type as handled cups (Horváth 2012a, Fig. 7. 5) and suspension cups (Horváth 2012a, Fig. 10. 2).

[228] Nevizánsky–Ožďani 1997, Taf. 3. 1.

[229] Torma 1973, 492, Torma 1977, 51.

[230] Torma 1977, 51.

[231] Němejcová-Pavúková 1981, Obr. 1–5, Němejcová-Pavúková 1984, Obr. 11 and 33, Type G.

[232] Němejcová-Pavúková 1981, Obr. 3. Type G3–5.

[233] Němejcová-Pavúková 1981, Obr. 4. Type G2–5.

[234] Němejcová-Pavúková 1981, Obr. 4. Type G6–7.

[235] Němejcová-Pavúková 1979, 162–164; Němejcová-Pavúková 1981; Němejcová-Pavúková 1991, 70–76, 82–84, Abb. 15; Němejcová-Pavúková 1992, 369–373.

The jugs from Pilismarót do not include a single undecorated piece. The following types could be distinguished based on the combination of decorative elements:

*1. 5. 1. Jug, Type 1 (Fig. 11. J1)*

This type has a slightly outturned rim, an incurving neck and a squat, globular body. The belly is divided into fields separated by symmetrically set, barely prominent, slender, vertical ribs. The fields between the ribs are filled with oblique channelling in alternating directions combined with three symmetrically set, vertical subcutaneus handles *(Pl. 2. 6, Pl. 16. 7, Pl. 30. 6–7)*. Jugs of this type were recovered from three burials (Graves 338, 364, 403, the latter yielding two jugs). The measurable vessels have a height of 14 cm, a mouth diameter of 12–14 and a base diameter of 5 cm *(Pl. 2. 6)*. István Torma quoted this jug type as an analogy to the similar jugs from Pári, which he dated to the end of the Boleráz period.[236]

As already noted by Torma,[237] this jug type with its single vertical rib is rare in the Boleráz material. He quoted but a single comparable vessel from Moravia,[238] and I did not find a single similar example among the intact or near-intact vessels in the ceramic assemblages published since then. Its mug variant is not attested in the ceramic inventory from the Pilismarót cemetery.

*1. 5. 2. Jug, Type 2 (Fig. 11. J2)*

The jugs assigned to this type are adorned with bundles of three vertical ribs dividing the body into fields filled with oblique or vertical channelling *(Pl. 1. 1, Pl. 17. 7, 9, Pl. 19. 7, Pl. 20. 6, Pl. 21. 2, Pl. 24. 3, Pl. 26. 10, Pl. 33. 5, 10, Pl. 38. 6, Pl. 40. 2, 8, Pl. 41. 5, Pl. 42. 17, Pl. 46. 7, Pl. 47. 7, Pl. 50. 25, Pl. 51. 2)*. The channelled patterns alternate rhythmically: one field is covered with oblique channelling from left to right, the next with channelling in the opposite direction *(Pl. 1. 1, Pl. 17. 7, Pl. 33. 5, Pl. 40. 2, Pl. 46. 7)*. Some jugs have oblique channelling on top and vertical channelling underneath in the fields between the bundles of three ribs *(Pl. 17. 9)*. Some vessels are provided with a vertically perforated "subcutaneous" handle on the belly that was then reinforced inside the vessel after the perforation *(Pl. 40. 2)*. The jugs usually have a fairly wide strap handle with crescentic section springing from the rim and rising slightly above it, and attached at bottom on the upper third or the middle of the belly. The height of the measurable pieces ranges between 7–*ca.* 12.4 cm, their mouth diameter between 10.5–15 cm and their base diameter between 4–5.5 cm.

Nineteen jugs of this type were recovered from eighteen burials (Graves 336, 365, 382, 386, 387, 388, 389, 409, 422, 427, 428, 433, 435, 440, 444, 445, 456, 457); one burial yielded two jugs (Grave 409, *Pl. 33. 5, 10*).

Exact counterparts of Type 2 jugs are not known from other Boleráz sites, only more or less similar fragments. Its mug variant (Type M4) is also attested in the ceramic inventory.

*1. 5. 3. Jug, Type 3 (Fig. 11. J3)*

The jugs assigned to this type differ from the previous two in that they lack ribs on the belly *(Pl. 1. 2, Pl. 7. 6, Pl. 23. 8, Pl. 28. 3, Pl. 29. 3, Pl. 32. 1, Pl. 35. 7, Pl. 37. 2, Pl. 39. 10, Pl. 42. 7, 14, Pl. 43. 4, Pl. 44. 3)*. They are provided with vertical subcutaneous handles that were reinforced in the vessel interior after the perforation of the vessel body. These jugs are generally decorated with oblique channelling in alternating directions arranged in triangle patterns *(Pl. 1. 2, Pl. 7. 6, Pl. 28. 3, Pl. 32. 1, Pl. 35. 7, Pl. 37. 2, Pl. 42. 14, Pl. 43. 4)*. One vessel is decorated with vertical channelling on the left side of the handle and with oblique channelling that grades into vertical channelling on the belly on the right side

[236] Torma 1977, 51.
[237] Torma 1977, 51.
[238] Torma 1977, note 41.

*(Pl. 42. 7)*. A similar botched design can be found on a mug from Grave 336 *(Pl. 1. 5)*. The measurable vessels have a height of 11–12 cm, a mouth diameter of 8.5–15 cm and a base diameter of 5.5–6 cm.

Fourteen jugs of this type were recovered from fourteen burials (Graves 336, 352, 353, 399, 400, 401, 406, 416, 419, 424, 434, 435, 436, 439).

A good counterpart to this jug type is known from Donnerskirchen,[239] although its handle differs slightly from the handles of the Pilismarót jugs. Its mug variant (Type M5) is also attested in the ceramic material.

*1. 5. 4. Jug, Type 4 (Fig. 11. J4)*

The form of this jug type is squatter and it barely has a neck. It is decorated with vertical and/or oblique channelling in alternating directions on the shoulder and belly, and it lacks subcutaneous handles and/or ribs. The narrow strap handle is set on the vessel's upper third: springing from the rim, it barely rises above the rim and joins the upper part of the belly *(Pl. 3. 7, Pl. 13. 5, Pl. 35. 2, Pl. 50. 9, Pl. 51. 12)*. Five specimens of this type were recovered from five burials (Graves 337, 358, 415, 453, 458). One measurable vessel has a height of 12.5 cm, a mouth diameter of 9.3 cm and a base diameter of 4 cm *(Pl. 13. 5)*.

Good analogies to this type have been published from Vrbové[240] and Gradina.[241] A variant with a subcutaneous handle has been found at Donnerskirchen[242] and Mostonga.[243] The mug variant (Type M6) is also attested in the ceramic inventory.

*1. 5. 5. Jug, Type 5 (Fig. 11. J5)*

This jug type has a slightly incurving neck and a squat, globular body decorated with three symmetrically set subcutaneous handles and lobes pressed out from the vessel interior, with vertical or oblique channelling between the lobes *(Pl. 21. 6, Pl. 29. 13, Pl. 30. 8, Pl. 9. 18, Pl. 46. 12)*. Five jugs of this type were recovered from five burials (Graves 388, 402, 403, 426, 447). The height of the measurable vessels ranges between 9.5–11.5 cm, their mouth diameter between 6.5–10.5 cm and their base diameter between 4.7–6.5 cm.

Jugs resembling this type have been found at Bajč,[244] although with a different handle, and at Jennyberg I.[245] The mug variant of this jug is also known (Type M7).

*1. 5. 6. Jug, Type 6 (Fig. 11. J6)*

This type is a singular vessel in the ceramic inventory from the burial ground. It is decorated with four parallel grooves around the neck and vertical channelling filling the fields between seven vertical ribs. The handle is lobed *(Pl. 19. 5)*. The jug representing the type was recovered from a single burial (Grave 385).

[239] Němejcová-Pavúková 1992, Abb. 5. 15.
[240] Němejcová-Pavúková 1979a, Tab. 1. 11.
[241] Němejcová-Pavúková 1992, Abb. 3. 1; Spasić 2011, Taf. 1. 6–7.
[242] Němejcová-Pavúková 1992, Abb. 5. 14.
[243] Govedarica 2001, 366. Abb. 2. 2.
[244] Němejcová-Pavúková 1992, Abb. 10. 10
[245] Ruttkay 2001, 537. Abb. 4. 3.

Fragments of comparable jugs are known from Cimburk,[246] and a somewhat like vessel was found in Grave 9/83 at Malá nad Hronom.[247] A cup from Gyöngyöshalász has a comparable lobed handle,[248] as do vessels from Gradina[249] and Nitriansky Hrádok,[250] and a mug from Bratislava.[251]

*1. 5. 7. Jug, Type 7 (Fig. 11. J7)*

The jug from Grave 452 represent another singular type with its short, cylindrical neck, biconical body and furrowed strap handle, decorated with channelling arranged in a zig-zag pattern on the shoulder and belly and three symmetrically set, vertical subcutaneous handles *(Pl. 49. 2)*. The curve of the handle differs from those of the other jugs in that the handle bottom is attached to the vessel body under the belly.

A similarly decorated vessel, although with different proportions, can be quoted from Žlkovce.[252] The mug variant of this jug is not attested in the ceramic inventory.

*1. 5. 8. Jug, Type 8 (Fig. 11. J8)*

This unusual type, which should perhaps be regarded more of a transitional form than a jug, is a plain, thin-walled vessel with incurving neck and globular body, provided with a loop handle *(Pl. 18. 5, Pl. 38. 3–5)* or a string-hole lug *(Pl. 42. 6)* under the rim. None of the recovered fragments could be refitted into a complete vessel. One fragment bears faint channelling arranged in a triangle pattern *(Pl. 38. 3–5)*. Jugs of this type were recovered from three burials (Graves 384/a, 422, 434).

Analogies to this type are known from Nitriansky Hrádok.[253] Its mug variant is not attested in the ceramic inventory.

*1. 5. 9. Indeterminate jugs*

Several jug fragments could not be assigned to a particular type *(Pl. 6. 9, Pl. 20. 8, Pl. 21. 7, Pl. 29. 7, Pl. 30. 4, Pl. 31. 8, Pl. 40. 7, Pl. 41. 1, 9, Pl. 43. 8, Pl. 48. 6, Pl. 50. 13, Pl. 51. 10)*, while a few fragments decorated with channelling *(Pl. 9. 6, Pl. 15. 3, Pl. 19. 10, Pl. 27. 1, Pl. 51. 8)* could come from any one of the jugs described under Types 1–5.

The mugs and jugs found at Pilismarót are vessels with short neck and rounded belly, with a slightly funnel-shaped, straight or constricted mouth. They have a rounded or squat, globular belly. All have a single handle; the handle rises slightly above the rim and rests a little above or on the middle of the belly. Most mugs have a slender strap handle or a somewhat thicker loop handle, while jugs are usually provided with a narrow strap handle with crescentic section. Some jugs have narrow strap handles with a double furrow. The rim and neck of the mugs and jugs are usually plain (except for Type 6 jugs), with the decoration applied to the vessel shoulder and the belly. The zone above the base is also plain. Both mugs and jugs generally have a straight or slightly rounded base.

The ingenious combination of various decorative elements (channelling in various directions, slender vertical ribs, subcutaneous handles) resulted in vessels with a richly diverse ornamentation, which in

[246] Zápotocký–Zápotocká 2001. Abb. 10. 7–8.
[247] Nevizánsky–Ožďani 1997. Taf. 2. 4.
[248] Szabó 1983, Pl. IV. 3; Kalicz 2001, 427, Abb. 9. 3.
[249] Němejcová-Pavúková 1992, Abb. 3. 1; Spasić 2011, Taf. 1. 6–7.
[250] Němejcová-Pavúková 1964, Obr. 15. 2.
[251] Němejcová-Pavúková 1992, Abb. 7. 4.
[252] Němejcová-Pavúková 1984. Obr. 29. 4.
[253] Němejcová-Pavúková 1964, Obr. 20. 5.

some cases also indicate chronological differences. However, the typochronology based on analogous finds and the radiocarbon-based chronology are sometimes at variance regarding certain types.

Oblique channelling in alternating directions arranged in triangle patterns is a popular decoration on mugs and jugs, and can also be found on cups and bowls. We might even say that this decoration (ceramic style) is one of the hallmarks of the pottery of the Boleráz period, Another typical element, encountered on mugs, jugs and cups alike, is the subcutaneous handle pressed out from the vessel interior, then perforated and finally reinforced in the vessel's interior. Three subcutaneous handles were generally made: one opposite the handle and one to its right and left. The process of how subcutaneous handles were made could be observed on the jug from Grave 427 *(Pl. 40. 2)*: the jug's belly was vertically perforated in two spots opposite the handle for the two openings and then a thicker blob of clay was applied to the vessel interior for reinforcement. This blob of clay became detached, revealing the process of how the handle had been made. This also suggests that subcutaneous handles were too weak to enable the vessel to be suspended after being filled with some substance.

### 1. 6. Cups *(Fig. 11)*

The basic type is a squat, globular, wide-mouthed vessel with short, cylindrical neck and rounded base. The handle rises above the rim and joins the vessel body at the belly. Plain and ornamented varieties are both attested.

Torma mentioned two handled cups from the Pilismarót cemetery, but did not discuss them at greater length.[254] According to Němejcová-Pavúková's type charts, cups were used from the Baden Ib to the Baden IIb phase.[255] She noted that the plain variety appears in the Baden Ia phase[256] and is encountered in the Baden Ib-Ic periods too.[257]

It is difficult to draw a sharp boundary between cups and other vessel types such as shallow handled bowls and wide-mouthed scooping vessels. For example, cups appear together with scooping vessels on János Banner's type charts.[258] Němejcová-Pavúková treated this type separately on the basis of the rounded vessel base,[259] while Nevizánsky and Ožďani distinguished the vessel on the basis of the neck and belly diameter.[260]

Eight handled cups and their fragments were recovered from seven burials at Pilismarót-Basaharc (Graves 341, 365, 384, 419, 433, 434, 441). I distinguished three types among them. The measurable cups had a height of 3.1–6.5 cm and a mouth diameter ranging between 6–12 cm.

*Undecorated cups*

*1. 6. 1. Cup, Type 1 (Fig. 11. C1)*

This type is a plain, wide-mouthed, short-necked, globular vessel with outturned rim and rounded base *(Pl. 18. 3, Pl. 40. 11)*. It was recovered from two burials (Graves 384, 433). One could be measured: H. 4.5 cm, dM. 6.3 cm.

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[254] Torma 1973, 494.

[255] Němejcová-Pavúková 1981, Obr. 2. Type B1–3, Obr. 3. Type B1–2, Obr. 4. Type B1–2; Němejcová-Pavúková 1984, Obr. 33. Type B2–5.

[256] Němejcová-Pavúková 1981, Obr. 1. Type B1.

[257] Němejcová-Pavúková 1984, Obr. 11. Type B1–2, Obr. 33. Type B1.

[258] Banner 1956, Pl. CXIII. 27, 29.

[259] Němejcová-Pavúková 1974, 258.

[260] Nevizánsky–Ožďani 1997, 260. However, this suggestion never became accepted in typological studies.

Good analogies to wide-mouthed, plain cups with a squat, globular body are known from Šturovo,[261] Žlkovce,[262] the Boleráz level of Jevišovice $C_1$,[263] Grave 15/83 of Malá nad Hronom,[264] Gyöngyöshalász[265] and the distant Ezero.[266] This cup type appears to have been fairly popular at the Nagyút-Göbölyjárás II site.[267]

*Decorated cups*

*1. 6. 2. Cup, Type 2 (Fig. 11. C2)*

This type is a wide-mouthed, short-necked, squat, globular vessel with outturned rim and rounded base. It is decorated with vertical and oblique channelling in alternating directions arranged in a triangle pattern and three symmetrically placed, vertical subcutaneous handles on the belly *(Pl. 17. 5, Pl. 44. 8)*. Cups of this type were recovered from two burials (Graves 365, 441). Their dimensions are as follows: H. 6.5 cm and 5.5–6 cm, respectively, dM. 12 cm and 8.4 cm, respectively.

*1. 6. 3. Cup, Type 3 (Fig. 11. C3)*

This type is a wide-mouthed, short-necked, squat, globular vessel with outturned rim, decorated with light vertical channelling from the shoulder downward *(Pl. 4. 10, Pl. 37. 3, Pl. 42. 4–5)*. It is provided with a strap handle rising above the rim *(Pl. 37. 3)*, sometimes of the furrowed variety *(Pl. 42. 4–5)*. Four cups recovered from three burials (Graves 341, 419, 434) were assigned to this category. Three of these cups could be measured: their height ranges between 3.7–5.3 cm, their mouth diameter between 5–8.5 cm, their base diameter between 6–9 cm.

Decorated cups are generally adorned with channelling or its imitation on the belly. The channelling can cover the entire vessel body or only the rounded belly. Cups decorated with channelling are known from several sites, with the best analogies coming from Vrbové[268] and the Boleráz level of Jevišovice $C_1$.[269] At Nagyút-Göbölyjárás II, the proportion of decorated cups was far below that of the plain varieties.[270] Good parallels can also be quoted from Balatonőszöd-Temetői-dűlő.[271]

Cups survived into the later Baden periods too, although in a slightly changed form,[272] with their form and decoration being much closer to handled bowls. The cups brought to light from the burials at Pilismarót-Basaharc can be assigned to the Boleráz period.

[261] Němejcová-Pavúková 1979, Obr. 4. 1, 3, 8, Obr. 10. 2.
[262] Němejcová-Pavúková 1984, Obr. 31. 16, 18–20.
[263] Medunová-Benešová 1981, Taf. 73. 6, 8, 9.
[264] Nevizánsky 1997, Taf. 3. 1.
[265] Szabó 1983, Pl. I. 4.
[266] Němejcová-Pavúková 1981, Obr. 8. 5, 7.
[267] Bondár 2010, 317.
[268] Němejcová-Pavúková 1979a, Tab. 1. 1–2, 4–10, 12.
[269] Medunová-Benešová 1981, Taf. 72. 3–4, 7, 10, Taf. 73. 10.
[270] Bondár 2010, 317.
[271] Horváth 2012a, Fig. 7. 1–2.
[272] Bondár 2009a, 280–281; Nagy 2010, 398–399.

### 1. 7. Beakers/flowerpot-shaped vessels *(Fig. 10. B)*

The basic type is a wide-mouthed, conical vessel, whose finer version is generally labelled a beaker, while its coarser variant a flowerpot-shaped vessel.[273] Both plain and decorated pieces are attested. While the vessel form itself resembles that of certain pot types, its surface finish and treatment differ, justifying its classification as a separate type.

This vessel type was found in two burials (Graves 390, 454). Grave 390 yielded the fragments of two different vessels *(Pl. 22. 3, Pl. 23. 3)*, both decorated with a row of stabs under the rim. The fragment from Grave 454 has a similar decoration *(Pl. 50. 16)*. The fragments were unsuitable for reconstructing the dimensions of the vessels. A miniature variant was recovered from two burials (Graves 403, 442).

This rather indistinct vessel type is rarely mentioned in the publications. It does not appear on Němejcová-Pavúková's type charts despite the fact that it is a type known from several sites. Anna Endrődi published three flowerpot-shaped vessels from the Budapest-Andor Street site,[274] which she assigned to the later Baden period, the Baden D–E (late Baden–Kostolac) period as defined by Neustupný.[275] Flowerpot-shaped vessels were also uncovered during the excavations preceding the construction of the Billa store at Nagykanizsa, a site dated to the Baden C–D transition according to Neustupný's chronological scheme.[276]

Nevizánsky dated this vessel type much earlier: a small flowerpot-shaped vessel with a tiny handle appears on his type chart of Boleráz vessels.[277] Comparable vessels, both with and without a handle and sometimes ornamented with small knobs, have been found at Šturovo,[278] Svodin,[279] Mužla,[280] Zesławicze-Dłubnia in the Cracow area[281] and Nagyút-Göbölyjárás,[282] all sites of the early Baden horizon. The ceramic inventory from Balatonőszöd too includes a similar vessel, described as an atypical bowl.[283]

Beakers were used on settlements and deposited in burials alike. Two burials of the Budakalász cemetery (Graves 368 and 378, both cremation burials) yielded vessels of this type.[284] In contrast, beakers were not placed in the graves uncovered in the Balatonlelle-Felső-Gamász burial ground.

In sum, we may say that this vessel type was current throughout almost the entire span of the Baden culture and that it was distributed over an extensive territory. It does not appear to have been a particularly frequent vessel type, even assuming that its fragments occurred on more sites than the site reports would suggest. The beakers from Pilismarót are quite clearly finds of the Boleráz period.

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[273] Its designation varies, although the few publications which cover this vessel type generally describe it as a flowerpot-shaped vessel.

[274] Endrődi 1997, Fig. 24. 7, Fig. 38. 6, Fig. 4. Type O2–3. In fact, the vessel described as a flowerpot-shaped vessel (Fig. 38. 5) is actually a dipper of the classical Baden period.

[275] Endrődi 1997, 130.

[276] P. Barna 2003, 109, Fig. 11. 6.

[277] Nevizánsky 2005, Obr. 15. 13.

[278] Němejcová-Pavúková 1979, Obr. 2. 12.

[279] Němejcová-Pavúková 1979, Obr. 13. 11–12.

[280] Kuzma 1995, Obr. 80. 5.

[281] Furholt 2009, Taf. 96. 13, Taf. 97. 7.

[282] Bondár 2010, Fig. 5. 3, Fig. 10. 3, Fig. 27. 4, Fig. 29. 4, Fig. 31. 2.

[283] Horváth 2012a, Fig. 32. 17.

[284] Bondár 2009a, Pl. CXLV. 368/3, Pl. CL. 378/1.

### 1. 8. Scooping vessels *(Fig. 10. S)*

Representing one particular variety of drinking vessels,[285] scooping vessels go by several names in the archaeological literature, being variously labelled handled cups, handled bowls and spherical dippers.[286] They should not be confused with the dippers of the Baden culture, which are narrow-mouthed, conical vessels with a high-drawn handle.

Most scooping vessels are wide-mouthed, conical, thick-walled, handled vessels with a loop handle rising above the rim and joining the vessel body at the base or slightly above it. Although they do share many similarities with handled cups and shallow handled bowls, their coarser, more robust manufacture justifies their treatment as a separate type.

One single example of this vessel type was found at Pilismarót (Grave 429: *Pl. 41. 6*). H. 4–5 cm, dM. 8.5 cm, dB. 5 cm. It was deposited together with a stone blade and a semi-spherical bowl.

This vessel type has received little attention in the archaeological literature. It does not appear on Němejcová-Pavúková's type charts. A similar vessel can be found among the types assigned to the Baden III and Baden IVa in Endrődi's typology[287] and a scooping vessel has been published from Salgótarján-Pécskő, a site assigned to the late Baden period.[288] A detailed discussion of scooping vessels can be found in my assessment of the pottery from the Budakalász cemetery,[289] where eleven burials contained plain, squattish scooping vessels[290] resembling the one from Pilismarót.

In my view, the Pilismarót scooping vessel has a dating value, given that it is not known from other Boleráz contexts, while its frequent occurrence in the Budakalász cemetery suggests a date in the early phase of the classical Baden period, implying that Grave 429 can be assigned to the end of the cemetery's use.

### 1. 9. Suspension vessels

Any vessel type could be used as a suspension vessel, provided that the vessel – whether a jug with subcutaneous handles, a mug, a churn (*Fischbuttenförmiges Gefäß*) or any other ceramic type – had adequately sturdy handles for suspension and that the suspension of the vessel from some fixture was statically possible. Subcutaneous handles were probably less suitable for suspending vessels owing to their fragility as a result of how they made and it therefore seems less likely that vessels with handles of this type were suspended, as already pointed out in the discussion of mugs and jugs (see above).

I assigned amphora-like vessels to this category from the Pilismarót cemetery.

#### *1. 9. 1. Amphora-shaped suspension vessels (Fig. 10. SV)*

Several varieties of suspension vessels resembling amphoras provided with vertically perforated handles are known. Some have a perforated foot-ring. There is a general consensus that these vessels were suspended by means of a cord threaded through the handle(s) and the perforation on the foot-ring.[291]

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[285] Banner 1956, Pl. CXIII. 22–23.

[286] This latter designation was used by Nándor Kalicz (Kalicz 1999, 87).

[287] Endrődi 1997, Fig. 4.

[288] Patay 1999, Fig. 2. 2.

[289] Bondár 2009a, 280, scooping vessel.

[290] Bondár 2009, Pl. XXIV. 53/2, Pl. XXV. 55/1, Pl. LIX. 132/2, Pl. LX. 143/1, Pl. LXVII. 160/1, Pl. LXXIII. 174/1, Pl. XCIX. 232/1, Pl. CXV. 295/1, Pl. CXLIII. 364/1, Pl. CXLVII. 367/4, Pl. CL. 378/3.

[291] The vessels assigned to this category were not categorised as suspension vessels based on empirical observations; only in a few cases was it actually tested whether they could be suspended by means of a cord threaded through the handles. As it turned out, statical problems were noted in the case of some vessels, meaning that it is not at

Most vessels are provided with two handles for suspension, alongside a few pieces with three or even four handles made for this purpose. The tube-like string-hole lugs, short loop handles and V-shaped, upward-pointing suspension lugs offered several options for the desired purpose. Suspension vessels have been discussed from many aspects, and they will be treated at greater length in Section IV.

Torma did not cover this vessel type in his preliminary report on the Pilismarót cemetery. Němejcová-Pavúková discussed suspension vessels in her analysis of the Aegean cultural contacts of the Baden culture.[292]

Three burials of the Pilismarót cemetery yielded suspension vessels: one is normal-sized (Grave 390), the other two are miniature vessels (Graves 434 and 447). All three represent different vessel types.

The amphora-shaped suspension vessel from Grave 390 has three vertical string-hole lugs. It is decorated with a double row of stabs around the neck *(Pl. 22. 8)*. H. 13–14 cm, dM. 8.5 cm, dB. 6 cm. The vessel's form recalls the amphoras of Type A2.

The miniature vessel from Grave 434 is a plain, squat vessel with four small loop handles *(Pl. 42. 3)*. It is one of the most archaic vessels in the ceramic inventory, whose best counterparts are known from the cultures thriving during the preceding period, at the close of the Middle Copper Age.[293]

The miniature vessel from Grave 447 resembles Type A1 amphoras with its short neck, squat, globular body and rounded base. It is decorated with a pronounced herringbone pattern and two upward-pointing perforated knobs *(Pl. 46. 13)*. Its proportions and decoration make it a genuine Boleráz amphora, which best resembles the vessel from Köveskál, although the latter was found together with a footed goblet, which was more current during the classical Baden period.[294]

### 1. 10. Dish-pots *(Fig. 10. DP)*

Dish-pots represent a transitional vessel form in the sense that being thick-walled, coarsened vessels, their manufacturing technique and fabric resemble pots, while in terms of their form and function, they are deep bowls. In his publication of the finds from Pári, Torma described this vessel type as a "thick-walled, semi-spherical vessel".[295]

This vessel type was recovered from four burials at Pilismarót-Basaharc (Graves 353, 364, 388, 399). One specimen was intact *(Pl. 21. 10)*, the other three were fragmentary *(Pl. 7. 11, Pl. 16. 12, Pl. 24. 2)*. Most are large, thick-walled vessels with coarsened surface *(Pl. 7. 11, Pl. 16. 12)*. One fragment is decorated with an impressed cordon under the rim and the vessel's furrowed handle has also survived *(Pl. 24. 2)*. The intact example from Grave 388 is an asymmetrical vessel with oval mouth and base, and has a row of fingertip impressions running under the rim. Its incurving lower part bears oblique finger-drawn lines. H. 16.5–17.5 cm, dM. 27 and 37.5 cm, dB. 12.5 and 17 cm *(Pl. 21. 10)*.

Dish-pots were most widespread and popular in the Bronze Age, although they can already be found in the Late Copper Age. In Němejcová-Pavúková's view, dish-pots appeared in the Baden III horizon[296] and they are also attested in the Baden IV period.[297]

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all certain that all of the vessels assigned to this category could be suspended or hung.

[292] Němejcová-Pavúková 1991, 78–79.

[293] M. Virág 2013, 73, Fig. 8. 6. M. Virág describes it as a pot, with a height of 11.8 cm, a base diameter of 7.8–8 cm, and a maximum diameter of 12.5 cm. M. Virág 2014, 42, Fig. 7. 6.

[294] Banner 1956, Taf. VII. 4–5.

[295] Torma 1977, 47.

[296] Němejcová-Pavúková 1974, 260.

[297] Endrődi 1997, Fig. 4. Type B5.

Dish-pots have been found at Palotabozsok,[298] Szakály,[299] Nevidzany,[300] Pári,[301] Esztergom-Diósvölgy,[302] Budapest-Medve Street,[303] Aparhant[304] and Nagyrécse.[305] More recently, dish-pots were recovered from five burials uncovered at Balatonlelle-Felső-Gamász.[306] Horváth distinguished two variants of dish-pots in the ceramic inventory from Balatonőszöd: dish-pots with an indrawn rim[307] and deep, globular dish-pots ("buckets").[308] She believes that the former had been used for storing liquids.[309] Fragments of these vessels came to light in high numbers on the settlement, principally from ovens and pits, and their miniature versions were also attested.[310]

In my publication of the oven uncovered at Esztergom-Diósvölgy, I noted that this vessel type is known not only from classical and late Baden contexts, but also from earlier ones.[311] The find assemblage from Esztergom dates to the Úny horizon which, as I argued in the study, represents an earlier Baden period that can be correlated with Němejcová-Pavúková's Baden II.[312] The finds from Aparhant are even earlier, corresponding to Němejcová-Pavúková's Baden Ic–IIa phase. It is therefore hardly surprising that dish-pots came to light in the Boleráz cemetery of Pilismarót. The presence of dish-pots in the culture's early and later periods reflect the long use of this vessel type.

It is unclear why this simple, unattractive vessel was chosen for deposition in burials. Four burials of the 110 graves in the Pilismarót cemetery yielded dish-pots and three burials of the twenty-three graves excavated at Balatonlelle-Felső-Gamász. At the same time, none of the 436 graves of the Budakalász cemetery contained a dish-pot, again confirming that there was some rationale behind the vessels chosen for deposition in the graves.

### 1. 11. Bowls *(Figs 12–13)*

In his preliminary report of the cemetery, Torma distinguished four bowl types: funnel-necked conical bowls, biconical bowls with rounded carination, semi-spherical bowls and conical bowls.[313] He offered a more detailed treatment of the different types in his publication of the finds from Pári.[314] The first type includes both plain and ornamented vessels, although most are lavishly ornamented with elaborate channelled patterns in their interior and often on their rim too, and their exterior is similarly richly adorned. Knobs are sometimes set on the carination and rows of nail impressions frequently encircle

[298] Banner 1956, Taf. CX. 11, 13.
[299] Banner 1956, Taf. XIX, 36.
[300] Němejcová-Pavúková 1974, 305, Abb. 40. 5.
[301] Torma 1977, Fig. 2. 7, Fig. 7. 15, Fig. 11. 12.
[302] Bondár 1987a, Fig. 3. 4.
[303] Endrődi 1991, 71, Fig. 6. 2.
[304] Bondár 2000, Fig. 8. 5, Fig. 13. 7, Fig. 21. 4.
[305] Bondár 2008, Fig. 10. 5.
[306] Nagy 2010, 396, Abb. 19. 4, Abb. 40. 1–2. Abb. 46. 5, 17.
[307] Horváth 2011, 38, Type 4.2.4.2; Horváth 2012a, Fig. 49.
[308] Horváth 2011, 38, Type 4.2.4.3; Horváth 2012a, Fig. 50.
[309] The one-time function of these vessels remains unknown. As far as I am aware, not one single vessel of this type has been submitted to archaeometric analyses in order to determine what they had contained. We can at most only assume that they had been used for storing liquids, but they could equally well have functioned as containers for solids such as cereals, ground flour, nuts, dried fruits and the like, or for mussels, smaller vessels, jewellery and other trinkets, and a variety of other articles.
[310] Horváth 2011, 38.
[311] Bondár 1987a, Fig. 3. 4.
[312] Bondár 1987a, 42–43.
[313] Torma 1973, 488–491.
[314] Torma 1977, 45, 47.

the neck. Some bowls are covered with dense combed, zig-zag or herringbone patterns.[315] The upper part of biconical bowls with rounded carination is relatively short and has a row of stabs under the rim – it is often difficult to distinguish them from semi-spherical bowls.[316] Both types are either plain or decorated with channelling in the interior.[317] Torma's fourth type is represented by conical bowls, to which he assigned the small, deep, conical bowls[318] and two miniature vessels.[319] He contended that flatter bowls with a pronounced carination were particularly typical for the Boleráz period,[320] although he also singled out two funnel-necked, conical bowls among the specimens assigned to this type that in his view were later than the Boleráz bowls decorated with incised zig-zag patterns, which in his opinion came from the cemetery's latest burials.[321]

In Němejcová-Pavúková's typological scheme, bowls represent a vessel type that was current during the Baden culture's entire span. She grouped bowls into three categories (marked as Types H, I and J). Type H bowls of the early Baden period are wide-mouthed biconical vessels with slightly constricted neck, rounded shoulder and, very often, with an omphalos base. Plain and decorated varieties both occur.[322] Type I represents a remarkable vessel, the so-called Bratislava type bowls, a wide-mouthed variety with flat, inward-slanting rim covered with decoration both on the exterior and interior.[323] In Němejcová-Pavúková's view, this bowl type was exclusive to the Baden Ib–Ic period. Not one single fragment of this rare bowl type was found at Pilismarót.

Type J represents the most widespread Baden bowl type, which comes in several varieties and sizes during the Baden Ia–III period. These bowls are wide-mouthed, funnel-necked, conical vessels, some plain and others covered with elaborate ornamentation created through a combination of various decorative elements.[324] Němejcová-Pavúková offered a detailed analysis of various decorative elements such as single rows of stabs, knobs, channelling, incised herringbone patterns and other motifs, which in her view provided chronological anchors for distinguishing different horizons. However, her claims regarding the possible dating value of decorative motifs were not wholly confirmed for each of her elements when tested through the detailed assessment of the ceramic inventory from more extensively excavated sites such as Nagyút-Göbölyjárás II, Budakalász-Luppa csárda, Balatonlelle-Felső-Gamász and Balatonőszöd-Temetői-dűlő, and thus I shall not discuss this point at greater length.

Highly elaborate patterns created by combinations of channelling in alternating directions and grooving characterise the bowls with decorated interior in the Boleráz period.[325] The decoration of bowl interiors became simpler and more orderly later.[326]

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[315] Torma 1973, 488–490, Abb. 2. 3–4, 7.

[316] Torma 1973, 490, mentions the fragment of a bowl of this type, but does not specify which grave it came from.

[317] Torma 1973, 490, mentions a bowl fragment decorated with dense combing on the exterior and channelling on the interior from Grave 390/a *(Pl. 23. 4)*.

[318] Torma 1973, 490–491. The bowls from Graves 343 *(Pl. 5. 1)* and 347 *(Pl. 3. 9)* were assigned to this type.

[319] Torma 1973, 491, from Graves 385 (a typo instead of Grave 395: *Pl. 25. 15*) and 387 *(Pl. 20. 1)*.

[320] Torma 1977, 45.

[321] Torma 1977, 47, the bowls from Graves 386 (a typo instead of Grave 385: *Pl. 19. 3*) and 397 *(Pl. 27. 7)*.

[322] Němejcová-Pavúková 1981, Obr. 1. Type H1–2, Obr. 2. Type H1–2; Němejcová-Pavúková 1984, Obr. 11. Type H1–3, Obr. 33. Type H1–3.

[323] Němejcová-Pavúková 1981, Obr. 2; Němejcová-Pavúková 1984, Obr. 11, Obr. 33. Type I1.

[324] Němejcová-Pavúková 1981, Obr. 1. Type J1–3, Obr. 2. Type J1–2, Obr. 3. Type J1–3, Obr. 4. Type J1–6, Obr. 5. Type J1–4; Němejcová-Pavúková 1981, Obr. 1. Type J1–3, Obr. 2. Type J1–2, Obr. 3. Type J1–3, Obr. 4. Type J1–6, Obr. 5. Type J1–4; Němejcová-Pavúková 1984, Obr. 11. Type J1–5, Obr. 33. Type J1–5.

[325] Vrbové: Němejcová-Pavúková 1979a, Obr. 1, Žlkovce: Němejcová-Pavúková 1984, Obr. 16. 2, Obr. 17. 3.

[326] Červený Hrádok: Němejcová-Pavúková 1974, Abb. 10.1, Nevidzany: Němejcová-Pavúková 1974, Abb. 10. 2, Tekovský Hrádok: Němejcová-Pavúková 1974, Abb. 58, Málé Kosihý: Němejcová-Pavúková 1974, Abb. 66.

The ceramic inventory from the Pilismarót-Basaharc cemetery is visibly dominated by bowls, both plain and decorated, the latter reflecting the potters' ingenuity in combining decorative motifs to create elaborate patterns during the Boleráz period. The greatest diversity can be noted in the channelled decoration on bowl rims.

A total of 265 bowls were recovered from 91 of the 110 graves uncovered in the burial ground. Their height ranged between 4.7–12 cm, their mouth diameter between 15–40 cm, their base diameter between 5.5–11 cm.

Two basic types can be distinguished: semi-spherical and funnel-necked, conical bowls, both decorated by combinations of various ornamental elements. The sub-types were distinguished according to their decoration.

*1. 11. 1. Funnel-necked conical bowls (Fig. 12)*

These bowls have a short, funnel-shaped neck and a conical body. The neck was usually polished, while the body under the shoulder was lightly or strongly coarsened.

Plain and decorated versions can both be found. The decorative elements include knobs, string-hole lugs, channelled patterns and incised herringbone motifs, which were combined in many arrangements.

Their size varies considerably, with their height ranging between 4.5–15.5 cm, their mouth diameter between 10–50 cm and their base diameter between 5.5–12 cm.

*Plain bowls*

1. 11. 1. 1. Conical bowl, Type 1 *(Fig. 12. CB1)*
The bowls assigned to this type come in smaller *(Pl. 5. 12, Pl. 14. 1, Pl. 20. 14, Pl. 23. 6, Pl. 31. 4, Pl. 39. 5, Pl. 42. 10, Pl. 48. 1)* and larger varieties *(Pl. 2. 2, Pl. 3. 8, Pl. 6. 6, Pl. 10. 3, Pl. 18. 1, Pl. 25. 1, Pl. 36. 7, Pl. 40. 4, Pl. 42. 11, Pl. 49. 3)*. The smaller ones are generally thin-walled, poorly-fired vessels, while the larger ones have a thicker wall and were more carefully made.

Twenty bowls of this types were recovered from nineteen burials (Graves 337, 338, 348, 349, 355, 360, 383, 387, 391, 392, 399, 407, 420, 423, 433, 434, 435, 448, 449, 452).

1. 11. 1. 2. Conical bowl, Type 2 *(Fig. 12. CB2)*
The bowls assigned to this type are funnel-necked vessels with rounded belly and profiled base *(Pl. 3. 9, Pl. 45. 11)*. Three bowls of this type were recovered from three burials (Graves 347, 394, 449), one with very worn channelling on the rim *(Pl. 25. 13)*.

1. 11. 1. 3. Conical bowl, Type 3 *(Fig. 12. CB3)*
Funnel-necked conical bowls with finger-drawn oblique furrows on the coarsened belly represent a separate type among the plain bowls *(Pl. 1. 9, Pl. 4. 6, Pl. 8. 5, Pl. 29. 12, Pl. 48. 14)*. Six bowls of this type were recovered from six burials (Graves 336, 340, 351, 388, 402, 451). The specimen from Grave 388 has two pairs of small knobs on the shoulder and short channelling on the rim interior *(Pl. 21. 3)*.

1. 11. 1. 4. Indeterminate plain conical bowls
Plain bowls that could not be securely assigned to any of the above types of Type 1–3 were recovered from thirty-three burials (Graves 348, 349, 351, 353, 354, 355, 359, 361, 363, 364, 365, 388, 391, 393, 396, 398, 405, 406, 409, 415, 416, 417, 418, 424, 428, 441, 445, 446, 447, 448, 453, 454, 455: *Pl. 5. 8, Pl. 6. 8, 10–11, Pl. 7. 13, 16, Pl. 9. 2–4, 8, 15, Pl. 10. 4–5, 11, Pl. 11. 8–9, 11, Pl. 14. 10, 12, 14–16, Pl. 16. 5–6, 8, Pl. 17. 1–2, Pl. 21. 11, Pl. 25. 3, 6–7, Pl. 26. 5, 9, Pl. 27. 3, 8, Pl. 28. 6, Pl. 32. 2, Pl. 33. 11, Pl. 35. 3, 5, Pl. 36. 5, Pl. 39. 12, Pl. 41. 4, Pl. 44. 9, Pl. 46. 9, Pl. 47. 2, 11, Pl. 48. 5, Pl. 50. 4, 19, 21, 24*).

*Decorated bowls*

1. 11. 1. 5. Conical bowl, Type 4 *(Fig. 12. CB4)*
The bowls assigned to this type are plain, save for the small knobs set on the shoulder. A single bowl could be assigned to this type *(Pl. 1. 8)*, to which a good analogy can be cited from Nitriansky Hrádok.[327]

1. 11. 1. 6. Conical bowl, Type 5 *(Fig. 12. CB5)*
The bowls assigned to this type are decorated with a row of stabs or punctates around the shoulder and small knobs *(Pl. 23. 1, Pl. 24. 5)*. Two bowls could be assigned to this type, recovered from two burials (Graves 390, 399), the bowl from the latter grave has strongly worn channelling in its interior.

1. 11. 1. 7. Conical bowl, Type 6 *(Fig. 12. CB6)*
Twenty-four vessels recovered from twenty burials were assigned to this type (Graves 339, 340, 343, 351, 356, 362, 363, 365, 385, 386, 400, 401, 414, 421, 423, 439, 443, 444, 449, 456).

These bowls are decorated with a row of stabs or punctates around the shoulder and small knobs *(Pl. 15. 6)*, while the rim interior is generally embellished with oblique channelling, most often in alternating directions *(Pl. 3. 1, Pl. 17. 4, Pl. 39. 4, Pl. 50. 27)*. One variant lacks the punctates encircling the shoulder and only has small pairs of knobs set on the shoulder and channelling on the rim interior *(Pl. 3. 2, Pl. 44. 6, Pl. 45. 4, 6)*; another has a row of punctates combined with two pairs of knobs and channelling on the rim *(Pl. 4. 3, Pl. 38. 1, Pl. 46. 3)*. Remnants of a red slip were observed on one fragment *(Pl. 3. 1)*.

Another variant of this bowl type has a plain body, while the rim interior is decorated with oblique channelling in alternating directions arranged in a triangle pattern *(Pl. 5. 3, Pl. 8. 1, Pl. 11. 1, Pl. 14. 11, Pl. 19. 2, 8, Pl. 28. 4, Pl. 29. 5, Pl. 34. 6, Pl. 45. 9–10)*. Yet another variant has an elaborate decoration covering the exterior and the interior: a row of stabs around the shoulder, oblique channelling in alternating directions arranged in triangle patterns on the rim interior and an interior divided into fields filled with channelling *(Pl. 15. 1)*.

1. 11. 1. 8. Conical bowl, Type 7 *(Fig. 12. CB7)*
The bowls assigned to this type are decorated with pairs of small knobs on the shoulder and alternating vertical and oblique channelling on the rim interior *(Pl. 6. 4, Pl. 37. 4)* or vertical channelling on the rim interior *(Pl. 8. 3, Pl. 13. 8–9)*. One variant is represented by bowls with a row of punctates or stabs encircling the shoulder and short channelling on the rim interior *(Pl. 2. 9)*. Another variant has a plain exterior *(Pl. 48. 7)*. All variants of this bowl are decorated with channelled patterns in their interior *(Pl. 16. 9, Pl. 35. 9)*. Remnants of a red slip survived on the bowl from Grave 346 *(Pl. 6. 4)*. The nine bowls assigned to this type were recovered from eight burials (Graves 338, 346, 351, 358, 364, 416, 419, 448).

1. 11. 1. 9. Conical bowl, Type 8 *(Fig. 12. CB8)*
The bowls assigned to this category have a plain, coarsened exterior and a rim interior decorated with short *(Pl. 2. 4–5, Pl. 4. 7–8, Pl. 5. 6, Pl. 7. 3, Pl. 8. 4, Pl. 10. 2, 13, Pl. 11. 3, Pl. 12. 1, Pl. 19. 11, Pl. 39. 1)* or wide channelling *(Pl. 23. 7, Pl. 40. 1, Pl. 41. 13)*. One bowl has its rim pinched downward into a spout-like form *(Pl. 30. 5)*. Seventeen bowls from fifteen burials were assigned to this type (Graves 338, 340, 344, 350, 351, 355, 356, 359, 362, 386, 399, 403, 423, 427, 432). The lost or misplaced bowl

[327] Němejcová-Pavúková 1964, Obr. 16. 12, 22–24.

decorated with vertical channelling on the rim interior from Grave 362 *(Pl. 15. 10)* probably represented this type too.

1. 11. 1. 10. Conical bowl, Type 9 *(Fig. 12. CB9)*
The bowls assigned to this type have a rim interior decorated with channelling, a row of punctates encircling the shoulder and an incised herringbone or zig-zag pattern covering the body *(Pl. 19. 3, Pl. 27. 7, Pl. 38. 10, Pl. 39. 13, Pl. 42. 16, Pl. 46. 14, Pl. 48. 13)*. The base interior is divided into four fields filled with channelling *(Pl. 19. 3, Pl. 48. 13)*. Some bowls in this category have a string-hole lug *(Pl. 19. 3)* or small knobs on the shoulder *(Pl. 39. 13, Pl. 48. 13)*. The seven bowls assigned to this type were recovered from seven burials (Grave 385, 397, 422, 424, 435, 447, 450).

1. 11. 1. 11. Conical bowl, Type 10 *(Fig. 12. CB10)*
The distinctive trait of this type is the light scoring or combed decoration covering the vessel body *(Pl. 16. 11, Pl. 21. 5, Pl. 25. 14, Pl. 48. 22, Pl. 50. 7)*. The rim interior is decorated with channelling in alternating directions arranged in fields *(Pl. 12. 5, Pl. 15. 9, Pl. 27. 6, Pl. 30. 3, Pl. 35. 1, Pl. 38. 9, Pl. 45. 7)*, while the base interior is divided into four fields filled with channelling in alternating directions *(Pl. 12. 5, Pl. 27. 6, Pl. 30. 3, Pl. 38. 9)*. Twelve bowls recovered from twelve burials were assigned to this type (Graves 359, 362, 364, 388, 395, 396, 403, 415, 422, 449, 451, 453).

1. 11. 1. 12. Indeterminate conical bowls
Decorated fragments of thirty-four bowls that could not be assigned to a particular type of Types 5–9 were recovered from twenty-four burials (Graves 350, 351, 353, 354, 359, 361, 363, 364, 387, 393, 395, 396, 405, 409, 424, 428, 442, 445, 447, 451, 453, 454, 455, 457; *Pl. 7. 1–2, 15, Pl. 8. 7, Pl. 9. 3, 5, 9, 16, Pl. 11. 7, 10, Pl. 14. 7, 17, Pl. 16. 4, Pl. 20. 3, 7, Pl. 25. 9, Pl. 26. 6–7, Pl. 28. 8, Pl. 33. 8, Pl. 39. 11, Pl. 41. 3, Pl. 43. 10, Pl. 46. 10, Pl. 47. 10, Pl. 48. 20–21, Pl. 50. 2, 8, 11, 22, Pl. 51. 1, 5*).

Good analogies to funnel-necked, conical bowls, both intact and refitted vessels, are known from several sites. Types 2 and 3 have good counterparts at Gradina,[328] which also yielded a bowl resembling the one with a less common profile from Grave 351 *(Pl. 9. 4)*.[329]

Bowls of Type 6 with a decorated exterior and interior can be found in the classical Baden period as well, reflecting the survival of the decorative style. Bowls with a similar ornamentation have been published from Červený Hrádok and Nevidzany.[330] Type 6 bowls ornamented in a like manner have been found in Boleráz contexts too, for example at Jennyberg I[331] and Gradina,[332] and the finds from the latter site also include a good parallel to Type 7 bowls.[333]

Type 9 bowls with incised patterns have been brought to light at Tekovský Hrádok,[334] and from Graves 2 and 7 at Fonyód.[335] A bowl decorated with a zig-zag pattern was recovered from a Boleráz context at Jennyberg I.[336] A bowl resembling Type 10 bowls is known from Šturovo.[337]

[328] Spasić 2011, Taf. 4. 1 and Taf. 4. 3.
[329] Spasić 2011, Taf. 4. 2.
[330] Němejcová-Pavúková 1974, Abb. 10. 1–2.
[331] Ruttkay 2001, Abb. 5. 3.
[332] Spasić 2011, Taf. 3. 3.
[333] Spasić 2011, Taf. 3. 2
[334] Němejcová-Pavúková 1974, Abb. 58. 1.
[335] Banner 1956, Taf. 11. 8, Taf. 12. 10.
[336] Ruttkay 2001, Abb. 5. 2.
[337] Němejcová-Pavúková 1979, Obr. 4. 13.

In sum, we may say that conical bowls were popular during the entire span of the Baden culture and across its entire distribution. This vessel type can be fairly easily distinguished from other ceramic wares. The ornamentation of these bowls is astonishingly rich and diverse owing to the ingenious combination of a few decorative elements (channelling, incised zig-zag and herringbone motifs, knobs, division of the base interior into fields).

*1. 11. 2. Semi-spherical bowls (Fig. 13)*

The vessels assigned to this broad category are bowls whose form resembles a sphere that has been cut horizontally, creating its rim and base. These bowls have no neck, and being hand-thrown vessels, their form is not perfectly semi-spherical: their rim is occasionally slightly indrawn or outturned, although this is not a typical attribute.

Plain and decorated variants both occur and their size varies considerably, with their height ranging between 6.8–12.5 cm, their mouth diameter between 18–*ca.* 43 cm and their base diameter between 5.2–11 cm.

*Plain bowls*

1. 11. 2. 1. Semi-spherical bowl, Type 1 *(Fig. 13. SB1)*
These plain bowls generally have a rough, coarsened surface, although traces of polishing can sometimes be noted on their upper part *(Pl. 7. 5, Pl. 10. 1, 7, Pl. 11. 4, Pl. 17. 10, Pl. 18. 2, Pl. 28. 2, Pl. 29. 4, Pl. 36. 9)*. One is decorated with a small knob *(Pl. 1. 12)*. Ten bowls of this type were recovered from nine burials (Graves 336, 352, 355, 356, 382, 384, 400, 401, 420).

1. 11. 2. 2. Semi-spherical bowl, Type 2 *(Fig. 13. SB2)*
This bowl type has a flat rim and is plain, save for a barely visible groove encircling the vessel under the rim *(Pl. 1. 10, Pl. 4. 11, Pl. 5. 1, Pl. 19. 12, Pl. 42. 15)*. Five bowls of this type were recovered from five burials (Graves 336, 341, 343, 386, 435).

Good analogies to the plain semi-spherical bowls can be quoted from Nitriansky Hrádok-Vysoký breh[338] and Žlkovce.[339]

*Decorated bowls*

1. 11. 2. 3. Semi-spherical bowls, Type 3 *(Fig. 13. SB3)*
This bowl type has a flat rim and is decorated with a groove encircling the vessel under the rim and channelling or fingertip impressions on the rim *(Pl. 4. 5, Pl. 29. 10, Pl. 31. 9, Pl. 40. 9, Pl. 48. 8)*, although some bowls in this category lack the groove around the vessel *(Pl. 2. 10, Pl. 9. 7, Pl. 35. 6)* and some have a coarsened surface *Pl. 2. 10)*, Eight bowls of this type were recovered from eight burials (Graves 338, 340, 351, 402, 408, 416, 433, 450). A plain variant of these bowls has been published from Gradina.[340]

1. 11. 2. 4. Semi-spherical bowls, Type 4 *(Fig. 13. SB4)*
The bowls of this type have a rough, coarsened body and a plain interior. The flat rim is decorated with fine channelling *(Pl. 3. 6, Pl. 7. 7, Pl. 13. 3, Pl. 30. 2, Pl. 33. 1, Pl. 38. 8, Pl. 41. 8, Pl. 43. 6, Pl. 45. 5, Pl. 50. 26)*, except for two specimens that have lightly impressed punctates on the rim instead

[338] Němejcová-Pavúková 1964, Obr. 19. 9, 11, 12, 17–19.
[339] Němejcová-Pavúková 1984, Obr. 31. 18–20.
[340] Spasić 2011, Taf. II. 1.

of channelling *(Pl. 11. 6, Pl. 19. 1)* and one piece which has a row of stabs on the rim exterior in addition to the channelled decoration on the rim *(Pl. 32. 4)*. Thirteen bowls of this type were recovered from thirteen burials (Graves 339, 352, 357, 358, 385, 403, 406, 409, 422, 429, 442, 443, 456).

1. 11. 2. 5. Semi-spherical bowl, Type 5 *(Fig. 13. SB5)*
The most distinctive trait of this bowl type is the impressed, omphalos-like base and the incised or channelled concentric circles *(Pl. 6. 1, Pl. 47. 1, 24. 6)* decorating the base interior. The type has a variant with channelled decoration on the rim *(Pl. 5. 7, Pl. 37. 5, Pl. 47. 1)*. Five bowls of this type were recovered from five burials (Graves 346, 348, 399, 419, 444).

1. 11. 2. 6. Semi-spherical bowl, Type 6 *(Fig. 13. SB6)*
The bowls assigned to this type all have a rough or coarsened exterior and a decorated interior, usually with elaborate channelled patterns *(Pl. 1. 11, Pl. 15. 4, Pl. 45. 8, Pl. 46. 11)*. Some are additionally ornamented with channelling on the rim *(Pl. 2. 1, Pl. 9. 14, Pl. 25. 4, Pl. 27. 5, Pl. 31. 1, Pl. 34. 4, Pl. 48. 3)* and with spiral *(Pl. 46. 1)* or channelled concentric circles on the base interior *(Pl. 3. 3, Pl. 12. 6, Pl. 43. 2, Pl. 44. 4, 5)*.

The bowl interior is richly decorated, usually with fields filled with oblique channelling separated by vertical channelling or oblique channelling in alternating directions.

Seventeen bowls of this type were recovered from sixteen burials (Graves 336, 338, 339, 354, 359, 362, 391, 396, 403, 414, 436, 439, 445, 447, 448, 449).

One good parallel to this type is a bowl from Vrbové with elaborate channelling in the interior (the pattern itself could not be reconstructed owing to vessel's fragmentary state), although in contrast to the Pilismarót vessels, the exterior is not coarsened but decorated with a zig-zag pattern on the belly.[341]

1. 11. 2. 7. Semi-spherical bowl, Type 7 *(Fig. 13. SB7)*
This bowl type has a decorated exterior and interior. The flat rim is decorated with channelling, the body is covered with dense, vertical combing from the shoulder downward, while the interior is ornamented with fields filled with channelling *(Pl. 23. 4, Pl. 35. 12, Pl. 42. 9)*. Three burials yielded a bowl each of this type (Graves 390, 416, 434).

A good counterpart of this bowl type is known from Žlkovce.[342] Torma quoted parallels to the bowls decorated with combing from Tamási-Gonozd, Duzs and Pári, where decorated fragments were found.[343]

1. 11. 2. 8. Indeterminate semi-spherical bowls
Several fragments of semi-spherical bowls that could not be assigned to a particular type were recovered from fourteen burials (Graves 351, 352, 359, 386, 387, 388, 391, 398, 408, 409, 423, 436, 450, 455; *Pl. 9. 10, Pl. 7. 8, Pl. 11. 12, Pl. 19. 6, Pl. 20. 5, Pl. 21. 8, Pl. 25. 8, 10–11, Pl. 27. 12, Pl. 31. 6, Pl. 33. 12, Pl. 39. 8, Pl. 43. 3, Pl. 48. 10, Pl. 50. 20*).

Semi-spherical bowls are less frequent than conical bowls in the ceramic assemblages from the currently known Boleráz sites. The semi-spherical bowls from the Pilismarót cemetery range from wide-mouthed, flatter forms (Types 2 and 6) to taller forms with a smaller mouth (Types 1, 3–5).

There are no known intact or refitted analogies to these bowls, again confirming that it was a much rarer type in vessel sets. Not one single bowl of this type was found at Nagyút-Göbölyjárás and neither

[341] Němejcová-Pavúková 1979a, Obr. 1.
[342] Němejcová-Pavúková 1984, Obr. 16. 2.
[343] Torma 1973, 490.

can an exact counterpart be quoted from Balatonőszöd. Conical bowls dominated the pottery from the burials uncovered at Balatonlelle-Felső-Gamász – the twenty-three graves yielded but a single semi-spherical bowl with indrawn rim.[344]

### 1. 12. Miniature vessels *(Fig. 14)*

Miniature vessels are in essence smaller versions of normal-sized vessels (perhaps with a specific function). They have been found on settlements and in burials in all regions of the Boleráz distribution. Neither Torma, nor Němejcová-Pavúková discussed these vessels, which can be regarded as the scaled-down versions of their utilitarian counterparts.

There is no generally accepted definition of miniature vessels in Central European archaeological scholarship: the label miniature is used as a synonym of small-sized, but there is no consensus of how small is small. Obviously, while prehistoric vessels can hardly be categorised with a millimetre accuracy, subjective judgements often govern the assessment of these vessels. Although miniature vessels have been attested in all prehistoric periods, relatively few Late Copper Age examples are known from the publications. The possible meaning and significance of miniature vessels have been explored in several studies that discuss the function and role of diminutive size vessels. These aspects of miniature vessels are discussed below and in Section IV covering the burial rites.

I assigned the vessels smaller than 5–6 cm to the category of miniature vessels, although I tried to avoid an obsessive categorisation based on size alone because it is my belief that there was some specific reason for creating miniature versions of certain vessel types. Over 16% of the burials yielded small-sized vessels, implying that it was not mere chance that scaled-down versions of certain types such as pots, bowls, mugs and suspension vessels were made too, while only the miniature versions of other types such as lids were recovered from the cemetery.

Twenty miniature vessels (pots, mugs, bowls, lids, cups, suspension vessels) were recovered from eighteen burials at Pilismarót (Graves 361, 387, 388, 391, 395, 403, 405, 409, 416, 423, 432, 434, 442, 443, 444, 447, 451, 457). Grave 457 contained three miniature vessels. Most of the miniature vessels were pots (seven pieces), followed by bowls (five pieces). Mugs, cups, suspension vessels and lids were each represented by two pieces in the ceramic inventory of the burial ground.

#### *1. 12. 1. Miniature pots (Fig. 14. 1–7)*

Seven miniature pots were recovered from six burials (Graves 361, 391, 405, 416, 451, 457). Similarly to their utilitarian normal-sized counterparts, several types could be distinguished among the mostly fragmented vessels. The height of the measurable pieces ranges between 5.9–6.3 cm, their mouth diameter between 6–6.5 cm and their base diameter between 2.5–3.4 cm.

Four miniature pot fragments densely covered with a herringbone pattern *(Pl. 14. 6, Pl. 25. 2, Pl. 28. 7, Pl. 35. 10)* correspond to Type P5 pots. The piece adorned with a punctate-decorated cordon under the rim and a tiny string-hole lug *(Pl. 48. 15)* represents Type P1, while the two plain vessels from Grave 457 *(Pl. 51. 6–7)* are the miniature counterparts of Type P3.

Good analogies to the miniature pots are known from Aparhant,[345] Balatonőszöd,[346] Nitriansky Hrádok-Vysoký Breh[347] and Arbon-Bleiche 3.[348]

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[344] Nagy 2010, Grave 7, vessel 1: Abb. 10. 1.
[345] Bondár 2000, Fig. 1. 4, 6, Fig. 7. 7.
[346] Horváth 2012a, Fig. 43. 4, Fig. 44. 1.
[347] Němejcová-Pavúková 1964, Tab. XXI. 4.
[348] Capitani–Leuzinger 1998, Taf. 1. 6–7.

*1. 12. 2. Miniature mugs (Fig. 14. 8–9)*

Miniature mugs were recovered from two burials at Pilismarót-Basaharc (Graves 443, 444). One is a 4.7 cm high squat, globular vessel with short, cylindrical neck, decorated with vertical channelling on the belly *(Pl. 45. 1)*, the other is a 4.7 cm high biconical vessel with a short, cylindrical neck, decorated with fields filled with oblique channelling separated by pairs of vertical channelling *(Pl. 46. 2)*. Their normal-sized versions are represented by Type M1 and M4 mugs.

Matching pieces can be quoted from Aparhant[349] and Balatonőszöd.[350]

*1. 12. 3. Miniature beakers (Fig. 14. 10–11)*

The classification of these small vessels is rather subjective because in view of their asymmetric form and relatively coarse workmanship, they could be regarded as pots too; however, their indrawn rim definitely distinguishes them from pots.

Miniature beakers were recovered from two burials (Graves 403, 442). One is a thin-walled, gently biconical, 7–7.5 cm high vessel with asymmetric body *(Pl. 30. 9)*. The other miniature beaker has a similar form, but is squatter and lower, with a height of 4.8 cm *(Pl. 43. 11)*.

*1. 12. 4. Miniature suspension amphoras (Fig. 14. 12–13)*

Miniature suspension vessels were recovered from two burials of the cemetery (Graves 434, 447). The small vessel from Grave 434 is a carelessly made, asymmetric vessel recalling pots, with two pairs of small handles for suspension on the shoulder and the belly *(Pl. 42. 3)*. H. 4.6–5 cm, dM. 5 cm, dB. 2.4–2.8 cm.

The miniature vessel from Grave 447 is a globular-bellied amphora with constricted neck, decorated with a wide herringbone pattern on the belly and two upward-pointing perforated knobs on the shoulder *(Pl. 46. 13)*. H. 5.2 cm, dM. 3.3 cm, diam. of belly 6.5 cm, dB. 2.6 cm.

Two similar miniature amphoras whose basic form resembled the decorated piece from Grave 447 have been published from Balatonőszöd.[351]

*1. 12. 5. Miniature bowls (Fig. 14. 14–17)*

Miniature bowls were recovered from five burials (Graves 387, 395, 409, 423, 432). Their height ranges between 3.5–4.7 cm. They include the miniature versions of several types described in the above.

One is a plain, shallow, semi-spherical bowl *(Pl. 25. 15)*, three are plain, thin-walled, conical bowls *(Pl. 20. 1, Pl. 33. 7, Pl. 41. 2)* and one is a funnel-necked bowl decorated with a row of punctates around the shoulder and a few incised vertical lines underneath *(Pl. 39. 2)*. The correlation of these miniature bowls with the normal-sized types would be a somewhat pointless exercise because the decorated piece is fragmentary, while the plain ones are clearly not the down-scaled versions of normal-sized bowls.

*1. 12. 6. Miniature lids (Fig. 14. 18–19)*

Miniature lids were recovered from two burials (Graves 388 and 457). Their diameter is 6.5 cm and 5.1 cm, respectively. The miniature lid from Grave 388 is decorated with an incised circle and five herringbone motifs *(Pl. 21. 1)*, while the small lid from Grave 457 has two hatched triangles touching at the tip *(Pl. 51. 4)*. Both have a plain underside. A plain miniature vessel with a mouth diameter of 5 cm *(Pl. 25. 15)* bears a greater resemblance to bowls than to lids and is therefore discussed among the former.

[349] BONDÁR 2000, Fig. 1. 4, 6, 8, Fig. 23. 1, 5–6.
[350] HORVÁTH 2012a, Fig. 3.
[351] HORVÁTH 2012a, Fig. 22. 3, Fig. 23. 4.

Normal-sized lids have not been found in the Pilismarót cemetery or on any other Baden site. For the time being, only the reduced-sized version of this artefact is known.

The problem of whether a vessel should be classified as a bowl or a lid was first raised in relation to Bratislava type bowls in the archaeological literature.[352] This wide-mouthed ceramic fine ware with lavishly decorated exterior and interior was widely distributed; however, the small lids from Pilismarót cannot be seen as their miniature versions.

A few vessels that can perhaps be associated with miniature lids were found at Ózd-Kőaljatető. Banner published a small bowl from this site, which he interpreted as a toy. Although it has a diameter of *ca*. 7 cm, larger than that of the miniature lids from Pilismarót, it bears a striking resemblance to the lids even though it only has a grooved decoration around the rim.[353] Mention must also be made of a "cylinder"-like vessel from Nitriansky Hrádok, whose body is covered with herringbone motifs and which has no known analogies; it was perhaps also a lid.[354]

In her typological assessment of the ceramic inventory from the Balatonőszöd settlement, Horváth also briefly discussed lids, mentioning several flat discs, some perforated through the middle, which she assumed to have been lids or trivets. However, the few pieces from Balatonőszöd-Temetői-dűlő[355] have little in common with the miniature lids from Pilismarót.

The two small lids from the Pilismarót cemetery should not be confused with similar artefacts perforated through their middle,[356] most of which were spindle whorls and are known from several sites, some lying quite far from each other.[357] Spindle whorls made from amber are also attested.[358] Certain types of the small perforated "lids" resemble the phaleras of later periods, which could also have functioned as musical instruments if perforated in the right place, at least according to one study.[359] However, for the time being, the one-time function of these small objects remains enigmatic.

## 2. Miscellaneous clay artefacts

These unusual, remarkable artefacts are also discussed at greater length in Sections IV and V.

### 2. 1. Stamp *(Fig. 14. 20)*

A flat, fan-shaped stamp was found in Grave 427 *(Pl. 53. 5)*. Its widening lower part is decorated with grooving, its face is covered with seven lozenges, each containing three impressed dots *(Pl. 40. 3)*.[360] This was the culture's first stamp found during an excavation in Hungary.[361]

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[352] Maran 1998; Bondár 2000a; Bondár 2002c.
[353] Banner 1956, Taf. LXXII. 9.
[354] Němejcová-Pavúková 1964, Tab. XXI. 3a-b.
[355] Horváth 2011, 39; Horváth 2012a, Fig. 53.
[356] The two decorated miniature lids from Pilismarót have good analogies from Nitriansky Hrádok-Visoký breh: Němejcová-Pavúková 1964, Obr. 2–3, Tab. XI. 14–15, Tab. 12. 6.
[357] Arbon-Bleiche: Capitani–Leuzinger 2001, Abb. 8. 4–5, Zeslawice: Furholt 2009, Taf. 103, 52. Nitriansky Hrádok: Němejcová-Pavúková 1964, Tab. III. 24, Tab. VI. 17, Tab. VIII. 3, Tab. XI. 14, 15, Tab. XII. 6, Tab. XV. 25, Tab. XVII. 19.
[358] Szmyt 2008, 220, Fig. 6. 3.
[359] Pasalodos et al. 2012.
[360] Torma 1975, Taf. 55. 2; Makkay 1984, 44, Fig. XXVIII. 10; Chapman 2001, Fig. 3. 4; Bondár 2010a, Fig. 3. 2.
[361] Kalicz 2011, 199.

### 2. 2. Clay cones *(Fig. 14. 21–24)*

One unusual artefact type is represented by the solid, unperforated clay cones, of which five specimens were found in four burials (*Pl. 35. 11, Pl. 43. 5, Pl. 45. 2–3, Pl. 48. 18*; Graves 416, 442, 443, 451). The single intact piece *(Pl. 43. 5)* has a curved tip, a plain base and a height of 5.2 cm. Both its sides are covered with an incised herringbone pattern. Grave 443 yielded two cone fragments *(Pl. 45. 2–3)*, both decorated with incised zig-zag patterns, and similar motifs adorn the cone fragment from Grave 451 *(Pl. 48. 18)*. The piece from Grave 416 appears to represent a different type with is rounded sides and the surviving portion of an obliquely incised pattern *(Pl. 35. 11)*.[362]

### 2. 3. Spindle whorls *(Fig. 14. 25)*

The two spindle whorls from the cemetery were recovered from a single burial (Grave 364; *Pl. 53. 4*). Both are conical, but one has a domed, the other a flat base (diam. 5 cm and 5.2 cm, respectively; *Pl. 16. 1*). The spindle whorls were deposited beside the vessels and a zoomorphic handle fragment. Another conical spindle whorl was found in Trench 3/4, unassociated with a burial *(Pl. 52. 6)*.

Conical spindle whorls with a slightly domed base and a vertical perforation are distinctive to the Boleráz period and can be easily distinguished from the spindle whorls of other archaeological periods even in the lack of accompanying finds. Spindle whorls, both decorated and plain, have been found on several sites of the Baden culture. Ring-like perforated spindle whorls are also known in addition to the conical ones. In the section on miniature lids, I already noted that plain or decorated flat spindle whorls with a central perforation are attested in Baden assemblages from several sites.[363]

### 2. 4. Rollers *(Fig. 14. 26–29)*

Fifteen unperforated rollers representing different types *(Pl. 29. 1, Pl. 32. 8, Pl. 42. 1, Pl. 44. 2)*, sometimes inaccurately called spools in the archaeological literature, were recovered from four burials of the Pilismarót cemetery (Grave 401: *Pl. 53. 1*, Graves 411, 434, 439: *Pl. 53. 2*). Two other fragments were found in Trench 3/4, unassociated with a burial *(Pl. 52. 7)*.

Three different types could be distinguished among the rollers deposited in the graves. Slender pieces with curved sides and slightly impressed top and base are the dominant type, represented by twelve pieces together with the unstratified ones (Grave 401: six pieces, *Pl. 29. 1*; Grave 411: four pieces, *Pl. 32. 8*; and the fragments of two unstratified cylindrical rollers: *Pl. 52. 7*). The second type is represented by a single piece, a squat cylindrical roller (Grave 434: *Pl. 42. 1*), while four pieces represent the third, more chunky type with slightly impressed top (Grave 439: *Pl. 44. 2*).

Both intact and broken rollers were deposited in the graves, a practice that was also noted in the Budakalász cemetery.[364]

### 2. 5. Clay spoon

The single clay spoon *(Pl. 20. 2)* was found under a small bowl in the middle of Grave 387 *(Pl. 53. 3)*. István Torma described its handle as a stylised bird depiction.[365]

[362] This small fragment with curved side may also have come from a rhyton.

[363] E.g. Němejcová-Pavúková 1964, Obr. 25. 2–3; Němejcová-Pavúková 1979a, Obr. 2. 6–7; Horváthová 2010, Tab. 51. 6, 9, Tab. 72. 4, 9, 14, Tab. 74. 3.

[364] Budakalász: Grave 403 (Bondár 2009, Pl. CLVI. 403/3-403/7).

[365] Torma 1973, 494.

### 2. 6. Clay drinking horn (rhyton)

Two of the more remarkable finds from the Pilismarót cemetery are the clay drinking horns, recovered from two burials (Graves 359, 405). A cattle horn-shaped vessel broken into several fragments lay above the stone packing of Grave 359 *(Pl. 53. 6)*. Its slightly outturned rim is decorated with short incisions. Its pointed tip with the perforation for suspension broke off. A barely prominent cordon separates the tip from the body covered with a zig-zag pattern. The brownish-dark grey vessel is strongly worn. L. 21.5 cm, dM. 9.5–9.7 cm *(Pl. 12. 4)*.[366] The stub of a small handle survives near the tip: a cord or a leather thong was probably threaded through this handle, enabling it to be suspended from or worn on a belt or attached to the clothing.

The fragment of a similar drinking horn was recovered from Grave 405 *(Pl. 28. 5)*. When the finds were inventoried, Torma put a paper note in the bag containing the rhyton from Grave 359 on which he jotted down that the rhyton fragment from Grave 405 came from this vessel. However, the re-examination of the finds clearly revealed that the fragment from Grave 405 was not part of the vessel from Grave 379, but came from another clay horn because its thickness, colour and ornamentation differed from the one found in Grave 359 and could not be fitted to it.

### 2. 7. Animal depictions *(Pls 54–55, Fig. 15)*

Several different types of animal depictions were found: animal figurines, a zoomorphic vessel handle and a spoon with stylised bird-shaped handle.

Five burials yielded animal figurines (Grave 359: *Pl. 12. 2, Fig. 15. 1*;[367] Grave 413: *Pl. 34. 1, Pl. 54. 1, Fig. 15. 5*;[368] Grave 414: *Pl. 34. 3, Pl. 54. 2, Fig. 15. 3*;[369] Grave 418: *Pl. 36. 6, Fig. 15. 6*; and Grave 451: *Pl. 49. 1, Pl. 54. 5, Fig. 15. 2*), and a sixth, the perhaps best preserved figurine, was found in the area between Graves 416 and 418 *(Pl. 51. 13, Pl. 54. 3–4, Fig. 15. 4)*.[370]

The animal figurines from Pilismarót are unusually large and chunky statuettes. Their length ranges between 11.7 cm *(Pl. 49. 1)* and 22.5 cm *(Pl. 34. 3)*, their height between 4.6 cm *(Pl. 34. 1)* and 10.6 cm *(Pl. 51. 13)*, while the thickness of the body between 3 cm *(Pl. 34. 3)* and 4.6 cm *(Pl. 12. 2)*.

Grave 364 *(Pl. 54. 6)* yielded a vessel handle modelled in the shape of an animal *(Pl. 16. 2)*, which Torma interpreted as perhaps depicting a sheep.[371] He described the handle of the clay spoon from Grave 387 as a stylised bird depiction *(Pl. 20. 2)*.[372]

### 2. 8. Wagon model *(Pl. 56, Fig. 16)*

The grave goods of Grave 445 included a rectangular clay object *(Pl. 47. 9)* that was published also by Torma in his preliminary report.[373] I too listed the plain rectangular vessel with peaked corners among the wagon models known from the Carpathian Basin.[374]

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[366] Torma 1973, Abb. 5. 1.
[367] Torma 1972, Kat. Nr. 273; Torma 1973a, Kat. Nr. 273; Torma 1973, Abb. 5. 2.
[368] Torma 1972, Kat. Nr. 274, Abb. 11. 1; Torma 1973a, Kat. Nr, 274, Abb. 11. 1; Torma 1972a, Taf. 56. 1.
[369] Torma 1972, Kat. Nr. 275, Abb. 11. 2; Torma 1973a, Kat. Nr. 275, Abb. 11. 2; Torma 1972a, Taf. 56. 2.
[370] Torma 1972, Kat. Nr. 276, Taf. 30; Torma 1973a, Kat. Nr. 276, Taf. 30.
[371] Torma 1973, 494.
[372] Torma 1973, 494.
[373] Torma 1975, Taf. 55. 3.
[374] Bondár 1990, Abb. 7. 3; Bondár 1992, 115, Fig. 7. 3; Bondár 2004, Fig. 2. 3; Bondár 2006, 229. Fig. 5. 3; Bondár 2012, Fig. 8. 3; Bondár 2012a, Fig. 8. 3.

During the re-examination of the finds from Pilismarót for this publication, I noticed that there was a perforation through one of the intact corners of the wagon box, no doubt for the axle *(Pl. 56. 3–4)*.

## 3. Lithics

The 110 graves of the cemetery yielded four stone axes and seven chipped stone implements, which were examined and assessed by Katalin T. Biró (see pp. 355–366), and thus they will only be discussed briefly here, with a focus on their archaeological context.

### 3. 1. Stone axes

Intact and broken stone axes *(Pl. 1. 4, 7, Pl. 4. 2, Pl. 20. 4)* were recovered from three burials (Graves 336, 340, 387), one of which contained two pieces (Grave 336). All the axes can be assigned to the category of shaft-hole shoe-last axes with a length of 7.5 to 9 cm.

As mentioned in the section on the site's research history, we first believed that the stone axes had been lost; however, to our delight, they resurfaced in the Kalocsa museum, to where they had been accidentally taken along with other finds, and were then returned to the Archaeological Institute.

The axes had been given to Ida B. Kutzián for archaeometric analyses after the excavations. She gave them to Csaba Ravasz for examination. We recently located his report, dated February 3, 1974, in the Archives of the Archaeological Institute.[375]

On Katalin Biró's request, the raw material provenancing of the stone axes was performed by Sándor Józsa (Department of Petrology and Geochemistry, Eötvös Loránd University). I also gave her a copy of Csaba Ravasz's report.

### 3. 2. Chipped stone implements

Nine chipped stone implements were recovered from seven burials (Graves 346, 386, 429, 444, 451, 453, 454). Graves 453 and 454 contained two implements, the other burials a single piece each.

According to the field diary, Graves 346 and 451 both contained an obsidian blade/flake *(Pl. 48. 19)*. Grave 386 contained a reddish arrowhead-like micro-chip *(Pl. 19. 13)*. The other finds were various blades and flakes *(Pl. 6. 2, Pl. 41. 7, Pl. 46. 5, Pl. 50. 10, 14)*.

[375] A report on the examination of the lithic artefacts written by Csaba Ravasz, dated February 3, 1974, was found among Ida B. Kutzián's papers. The report is in the Archives of the Archaeological Institute, filed under Dok. 12/2002. "F" jegyzőkönyv. Csaba Ravasz presented the results of his examination of various finds from several sites (Polgár-Csőszhalom, Tiszapolgár-Basatanya, Pilismarót, Tolcsva) to Ida B. Kutzián in one report. We know from his hand-written tables and Ida B. Kutzián's notes that he had examined twenty-seven artefacts from Pilismarót, among them four trapezoidal axes. He numbered the examined artefacts consecutively in his report, from which Ida B. Kutzián later tried to identify the sites. She jotted down the following on the manuscript of Report F: "Cannot be identified with the necessary accuracy, thin sections need to be checked!" Somebody else also jotted down in the manuscript that the artefacts described under nos 17–20 come from "Pm-Bh", i.e. Pilismarót-Basaharc. The graves from which the axes originated could be identified based on the hand-written note recording the laboratory number and the entry number under which the results were presented in the report found in the bag containing the stone axes.

## 4. Vessels decorated in the Furchenstich style

According to current archaeological scholarship. pottery made in the *Furchenstich* style predates the Boleráz period and therefore the burials containing *Furchenstich* vessels represent the cemetery's earliest burials.

Torma recovered *Furchenstich* vessels from Graves 365, 390 and 459, and unstratified pottery of this type was also found at a depth of 125 cm in Trenches d/5–e/5 *(Pl. 52. 10)*, which in his view corresponded to the Copper Age occupation level. The *terminus ante quem* of the *Furchenstich* pottery sherds was the stone packing of the Late Copper Age burials which they could hardly have post-dated.[376]

It seems likely that when the site of the Pilismarót-Basaharc cemetery was chosen, there were no visible remains of the earlier *Furchenstich* features, which is also confirmed by the depth data recorded in the field diaries (see *Table 2* on p. 11 and Section IV. 7 below).

Lying in the middle of the stone packing of Grave 365 were the few fragments of a bowl *(Pl. 17. 1)*, while the fragments of a cup *(Pl. 17. 5)* lay near the northern edge of the stone packing. The grave can be dated to the cemetery's early phase in view of the wide-mouthed cup and the sharply carinated, shallow bowl. István Torma recorded in the field diary that additional pottery sherds *(Pl. 17. 2–4, 6–8)* were found beyond the northern edge of the stone packing whose association with the grave was dubious. Two of these sherds clearly came from a *Furchenstich* vessel *(Pl. 17. 3, 6)*, the others from Boleráz pottery.

In Grave 390, the pottery sherds decorated in the *Furchenstich* style lay under the stone packing. The ashes were deposited at a depth of 160 cm. Placed beside the ashes at a depth of 150 cm were a large cordon- and knob-decorated vessel *(Pl. 22. 2)*, probably with the mouth downward, and a jug (?) *(Pl. 22. 8)*. The vessels were crushed by the weight of the earth to the extent that their original position could not be accurately determined. A smaller vessel *(Pl. 22. 3)* lay in the grave's south-eastern part. A small vessel fragment *(Pl. 22. 5)* decorated in the *Furchenstich* style lay some 50 cm away from the small heap of sherds, at the same depth as the vessels. No other similar fragments were found, suggesting that it had not been part of the grave inventory and that it had probably become buried or had been discarded earlier. Two other small pottery sherds decorated in the *Furchenstich* style *(Pl. 22. 6–7)* were found by one of the stones adjacent to the vessels, lying 5 cm deeper than the other vessel fragments. It seems likely that these sherds had not been deposited at the time of the burial, but had become buried earlier. The ashes lay deeper because a small hollow had probably been scooped out in the ground for them into which they were deposited (although it was noted that this hollow could not be observed in the brownish earth during the excavation). Two indistinct body fragments *(Pl. 22. 1–4)* were found underneath the grave when the soil was turned over for a depth of 20 cm, where the earth graded into the yellow subsoil. A cluster of sherds was found among the scattered stones east of the stone packing of Grave 390. This assemblage was labelled Grave 390/a. Torma contended that the *Furchenstich* sherds *(Pl. 22. 5–7)* predated the grave and that they had become part of the grave inventory accidentally when the ashes were deposited simply because they lay on the ground at the time. He dated Grave 390 to Phase 2 of the Boleráz group, near the end of that phase.[377] However, the radiocarbon dates indicated that this date would be more probable for Grave 390/a (3500–3340 cal BC), and it is possible that the bag containing the finds was labelled erroneously.

The grave inventory of Grave 459 is quite evidently made up of the finds of the *Furchenstich* period *(Pl. 49. 5–8)*. The fragments of four vessels lay in a heap under the stone packing, near the grave's

[376] Torma 1973, 503.
[377] Torma 1973, 504–505.

eastern edge. The vessel fragments decorated with pendent triangles and a lattice pattern *(Pl. 49. 6–8)* all came from vessels decorated in the *Furchenstich* style.

These vessels differ substantially from the pottery deposited in the Boleráz graves regarding both their form and their ornamentation. The two "pots" from Grave 365 could be better classified as mugs or jugs *(Pl. 17. 3, 6)*, and the squat "bowl" from Grave 459 *(Pl. 49. 8)* too differs from the vessel forms generally regarded as bowls. A long-necked jug *(Pl. 49. 6)* and a squat, semi-spherical bowl (?) decorated with pendent triangles filled with a dense lattice pattern *(Pl. 49. 7)* too represent typical *Furchenstich* vessel forms. The funnel-necked bowl with its distinctive knob from Grave 459 *(Pl. 49. 5)* has its counterparts in the Kevderc-Đjerdap group, which also predates the Boleráz period.[378]

Opinions are divided regarding the chronology of the Furchenstich pottery and the Boleráz group relative to each other. The periodisation of the Middle Copper Age has changed substantially in the light of new research findings during recent decades.

Archaeological scholarship has since long been preoccupied with the problem of the *Furchenstich* ceramic style and culture of Central European origin, known as the Bajč–Retz–Gajáry and Kevderc–Đjerdap cultural unit in the neighbouring countries.[379] In Hungary, Nándor Kalicz can be credited with first identifying the Balaton group, which he later termed Balaton–Lasinja culture, from which he then separated a new cultural unit, the proto-Boleráz group. At present, Kalicz regards the three phases of the cultural unit that he had earlier distinguished[380] as three separate cultures, which had evolved from different components under various cultural impacts. In his overview of the Balaton–Lasinja culture, he treated his earlier Balaton–Lasinja I and Balaton–Lasinja II–III as separate cultures[381] and proposed that the latter be renamed *Furchenstich* pottery culture.[382] He later went on to modify the periodisation of his Balaton–Lasinja II–III, classifying a part of the sites earlier assigned to Balaton–Lasinja II and Balaton–Lasinja III as representing the *Furchenstich* culture, and distinguishing a new cultural unit from Balaton III, which he termed proto-Boleráz.[383] Very simply put, proto-Boleráz could be distinguished on typological grounds: while it lacked low, wide-mouthed, handled cups with the typical *Furchenstich* decoration, other *Furchenstich* vessel types continued to be used and new elements such as channelling made their appearance. *Kerbschnitt* (excised patterns), *Furchenstich* and incised lattice patterns either disappeared or underwent a change, and encrustation too ceased.[384] However, the introduction of the label "proto-Boleráz" became a source of new uncertainties in the cultural attribution of archaeological assemblages and in archaeological terminology. The identification of typological differences based mostly on stray or unstratified finds remains dubious and I too have my doubts regarding the proto-Boleráz nature of certain sites.[385] András L. Horváth and Zsuzsanna M. Virág devoted several studies to the *Furchenstich* assemblages from Hungary, their cultural connections and the controversial issues in their research.[386] Kalicz has recently published a new overview of the proto-Boleráz problem in a study

[378] Durman 1982, Tb. 2. 1, Tb. 5. 1. The bowls have perforated knobs set beside each other, while the Pilismarót bowl has a single knob perforated in two adjacent spots.

[379] Seewald 1940; Točík 1961; Točík 1964; Ruttkay 1971; Janák 1976; Dimitrijević 1980; Ruttkay 1988; Ruttkay 1991; Ruttkay 1995; Ruttkay 1997; Pavúk 2001.

[380] Kalicz 1969; Kalicz 1969–1970; Kalicz 1973; Kalicz 1979–1980.

[381] Kalicz 1980, 247–267; Kalicz 1982, 3, 9.

[382] Kalicz 1982, 8.

[383] Kalicz 1991, 375, 380; Kalicz 1993, 329; Kalicz 2001.

[384] Kalicz 1991, 375, 380.

[385] Bondár 2001, 440; Bondár 2002, 9.

[386] Horváth 1990; Horváth 1993; Horváth 1994; Horváth–H. Simon 1997; Horváth 2001; Horváth–H. Simon 2003; M.Virág 2013; M. Virág 2014.

on the finds from the large settlement investigated at Petrivente in County Zala, where large quantities of finds were brought to light from well-documented, secure contexts.[387]

One of the obstacles to resolving the "*Furchenstich* problem" is that genuine *Furchenstich* finds have also been recovered from Boleráz contexts on settlements (Nitriansky Hrádok,[388] Komjatice[389]). Few burials of the culture are known. Cremation burials have been uncovered at Komjatice and Gajáry in Slovakia, and at Keszthely-Halászrét, Neszmély and Nadap in Hungary. The number of inhumation burials from this period is even less.[390]

[387] KALICZ–HORVÁTH 2010.
[388] NĚMEJCOVÁ-PAVÚKOVÁ 1964, Obr. 24.
[389] NĚMEJCOVÁ-PAVÚKOVÁ 1979, Obr. 17–18.
[390] HORVÁTH–H. SIMON 2003, 128.

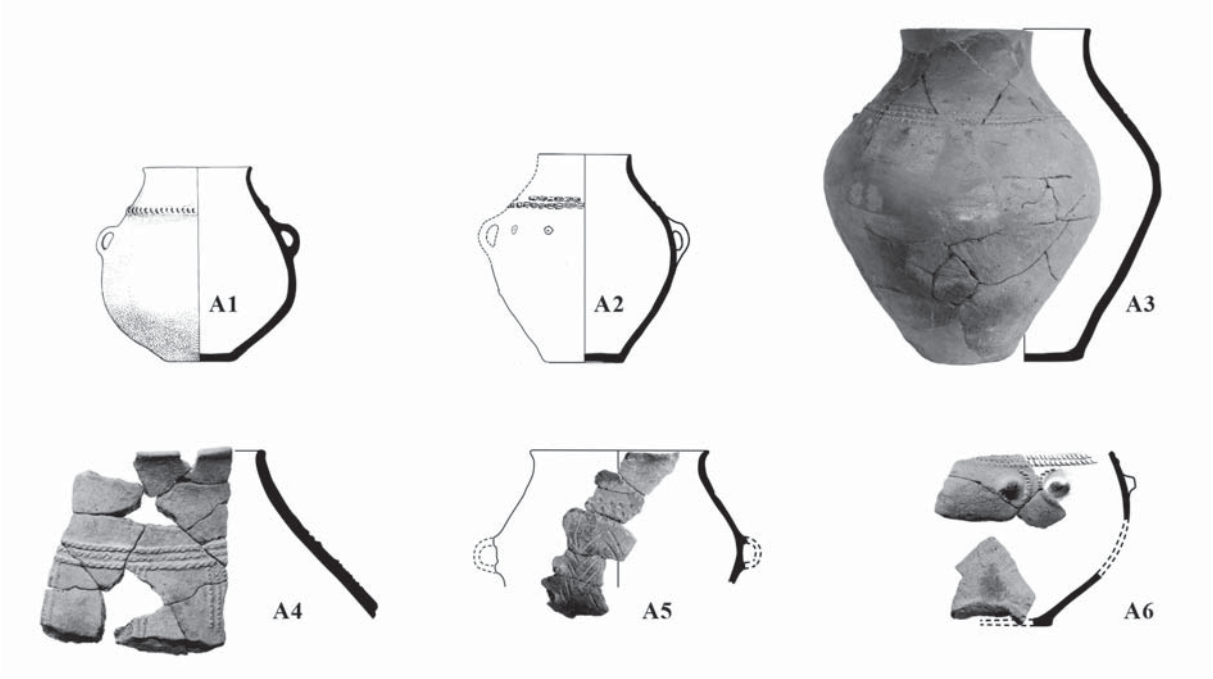


*Figure 9. Pilismarót-Basaharc. Type chart of the vessel types. Amphoras*

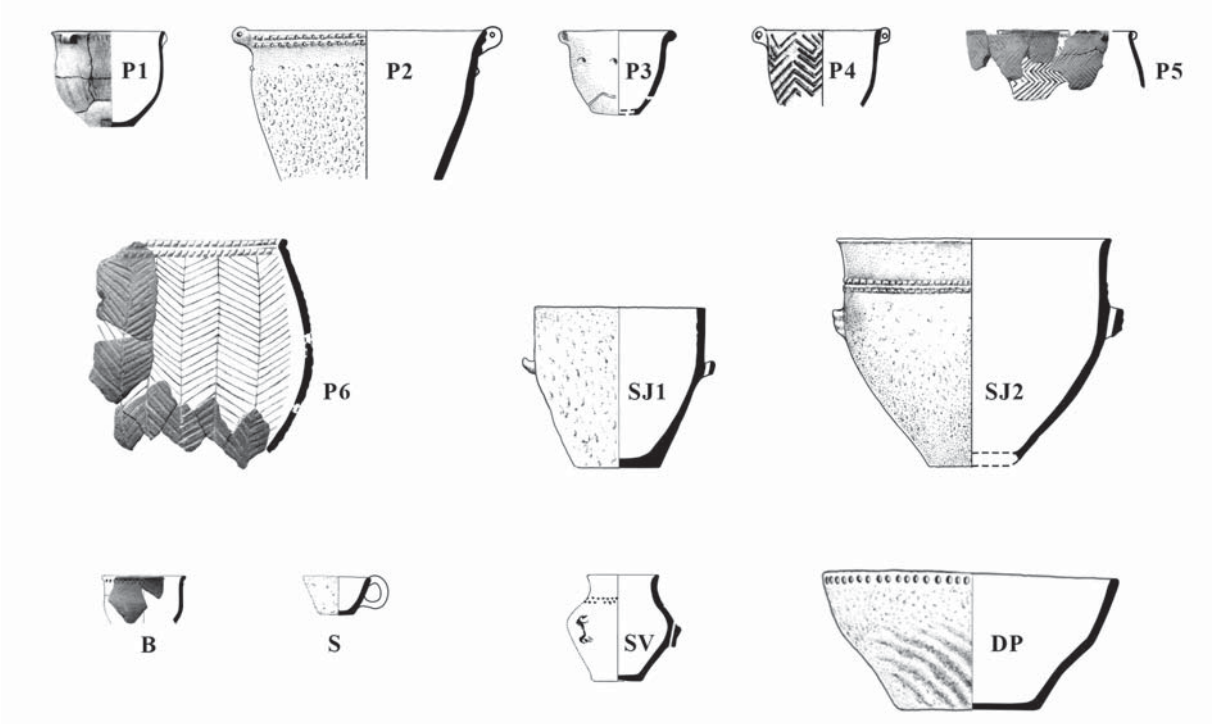


*Figure 10. Pilismarót-Basaharc. Type chart of the vessel types.*
*Storage jars, pots, dish-pots, beakers, scooping vessels and suspension vessels*

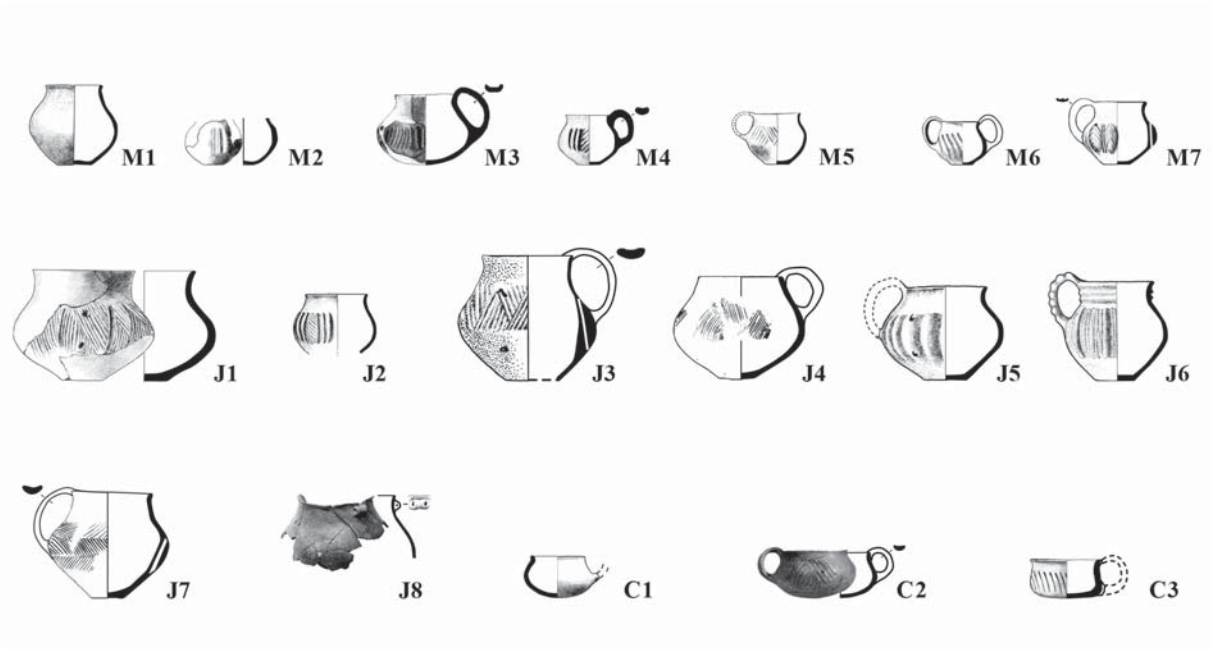


*Figure 11. Pilismarót-Basaharc. Type chart of the vessel types. Mugs, jugs and cups*

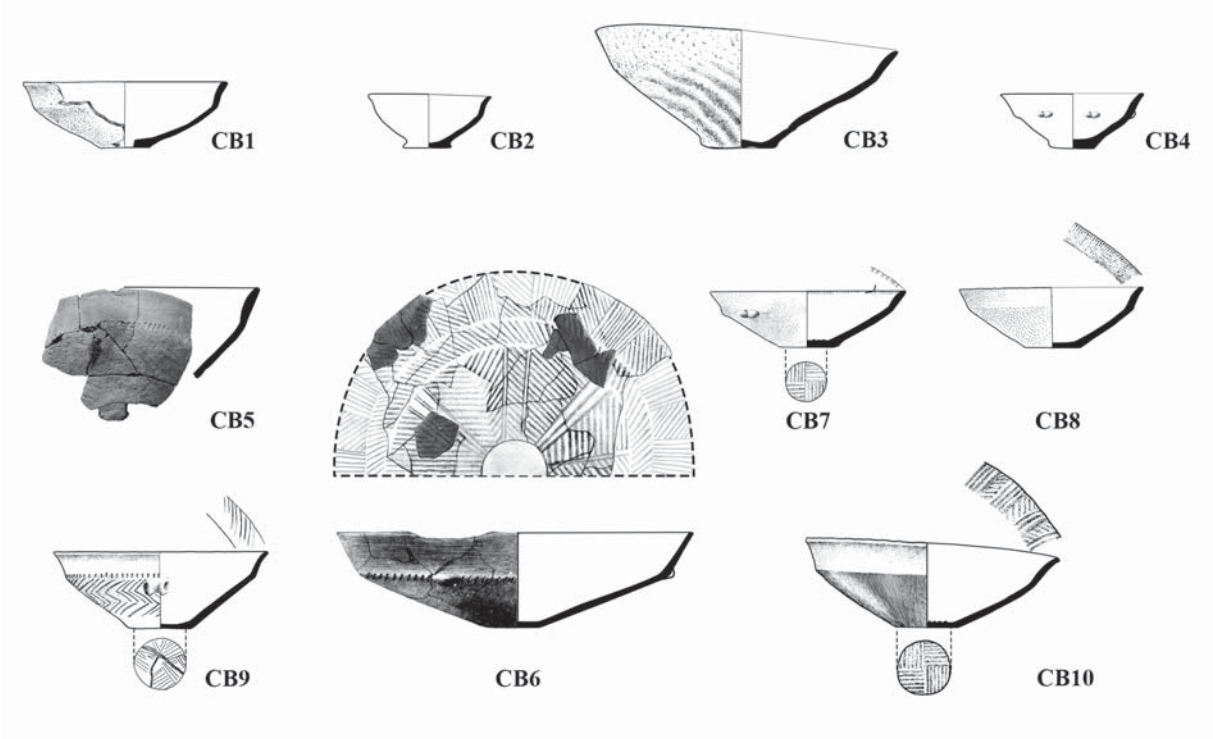


*Figure 12. Pilismarót-Basaharc. Type chart of the vessel types. Conical bowls*

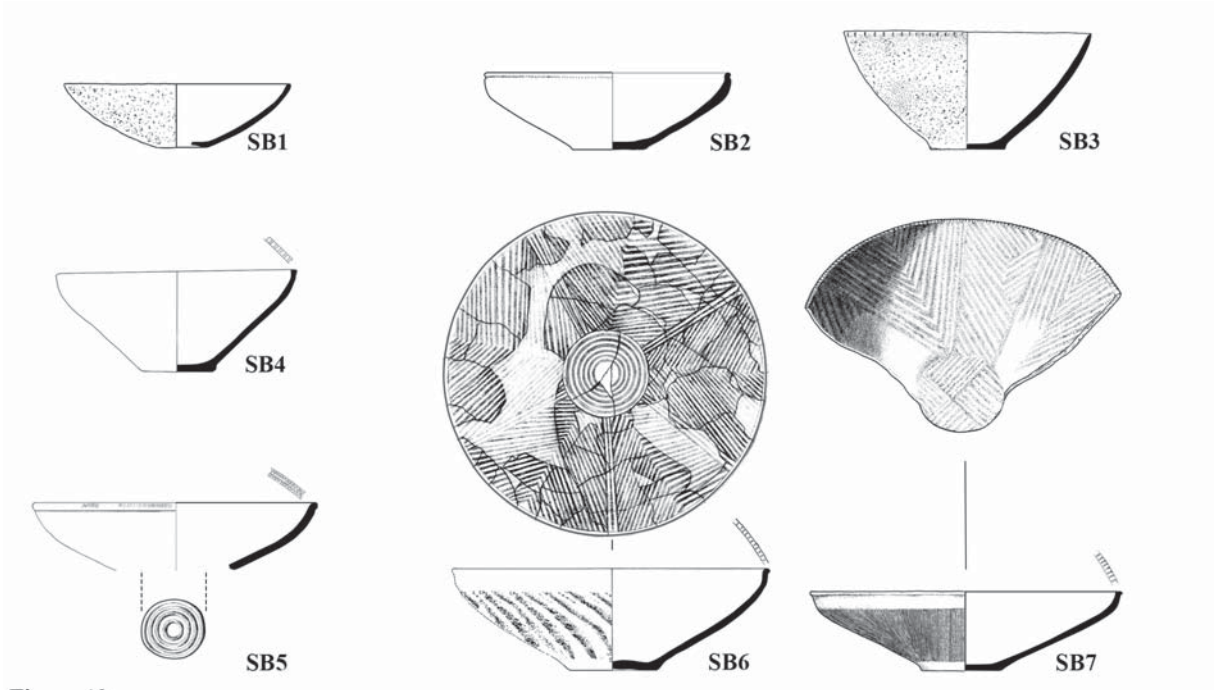


*Figure 13. Pilismarót-Basaharc. Type chart of the vessel types. Semi-spherical bowls*

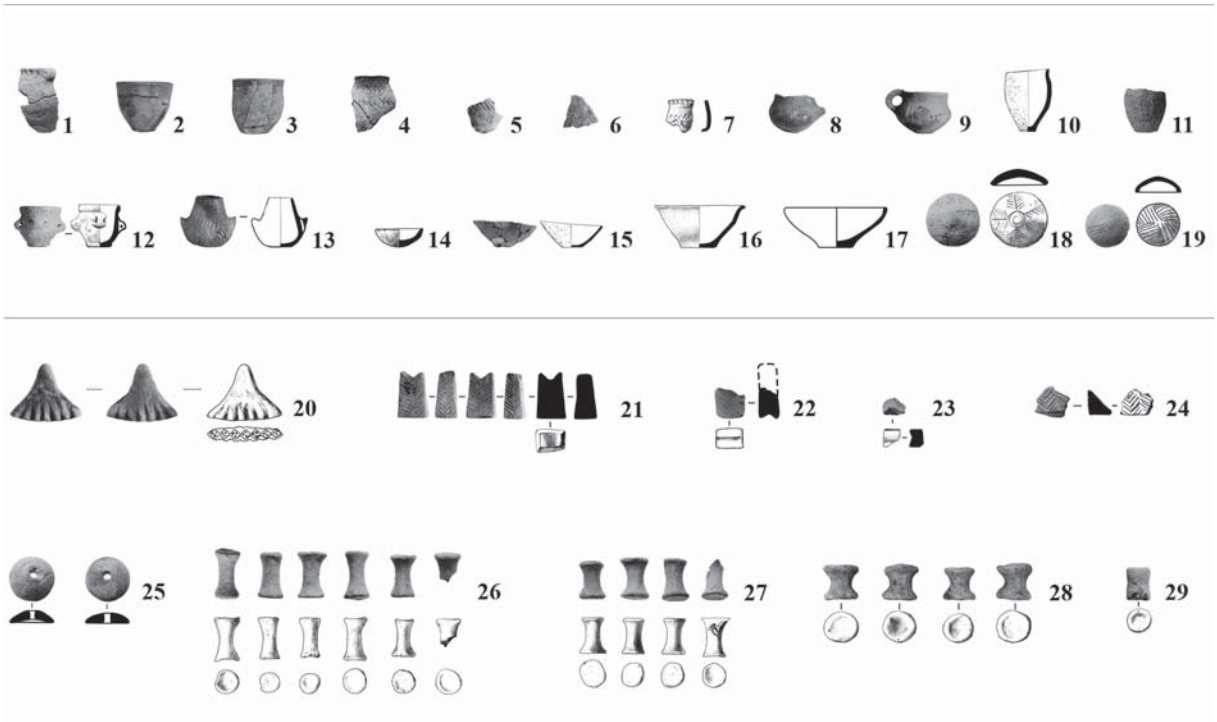


*Figure 14. Pilismarót-Basaharc. Miniature vessels, spindle whorls, stamp, clay cones and rollers*

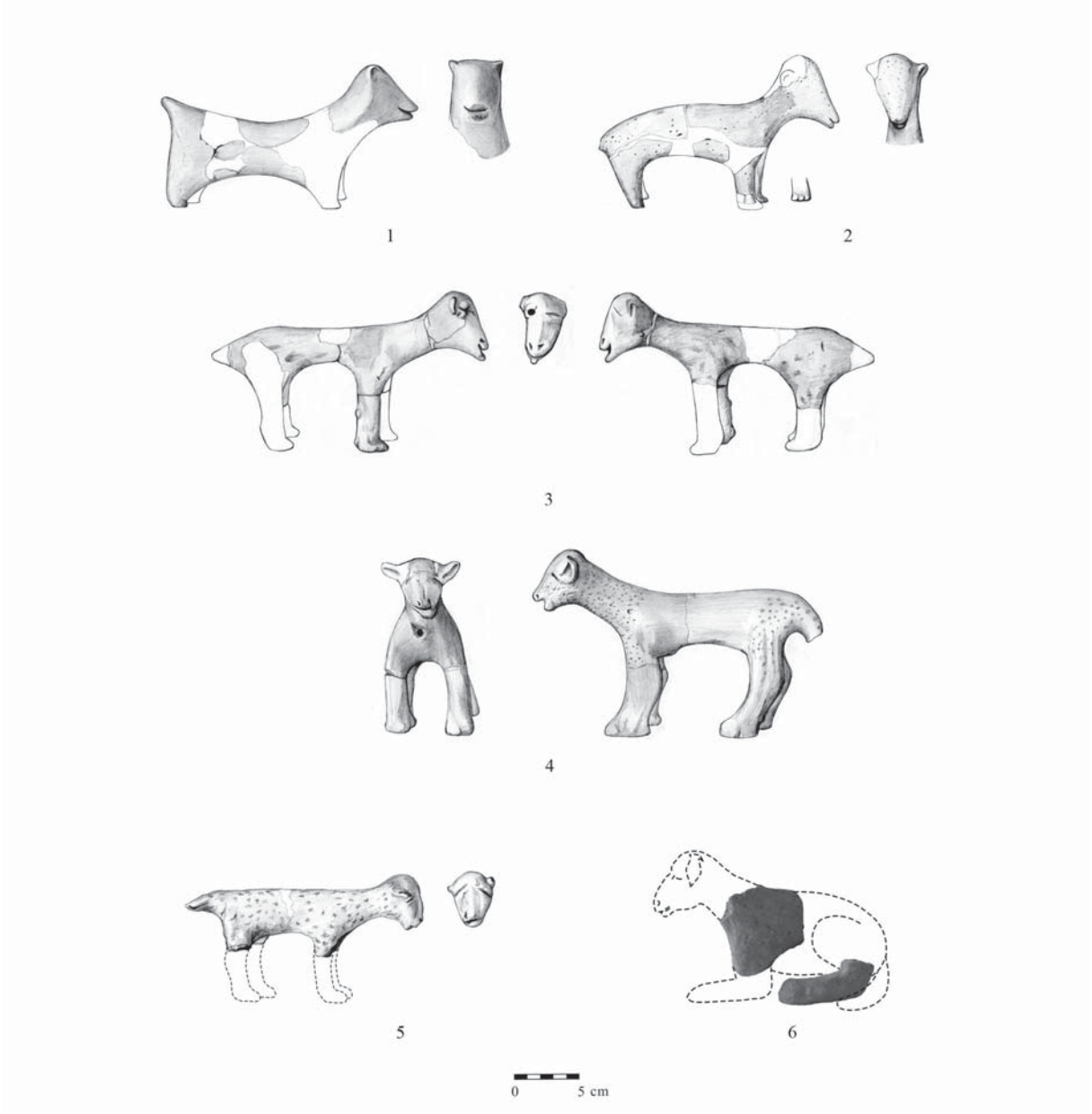


*Figure 15. Pilismarót-Basaharc. Animal figurines. 1. Grave 359, 2. Grave 451, 3. Grave 414, 4. unstratified find from the area between Graves 416 and 418, 5. Grave 413, 6. Grave 418 (drawings by Magda Éber and Ida Szathmáryné Polgár)*

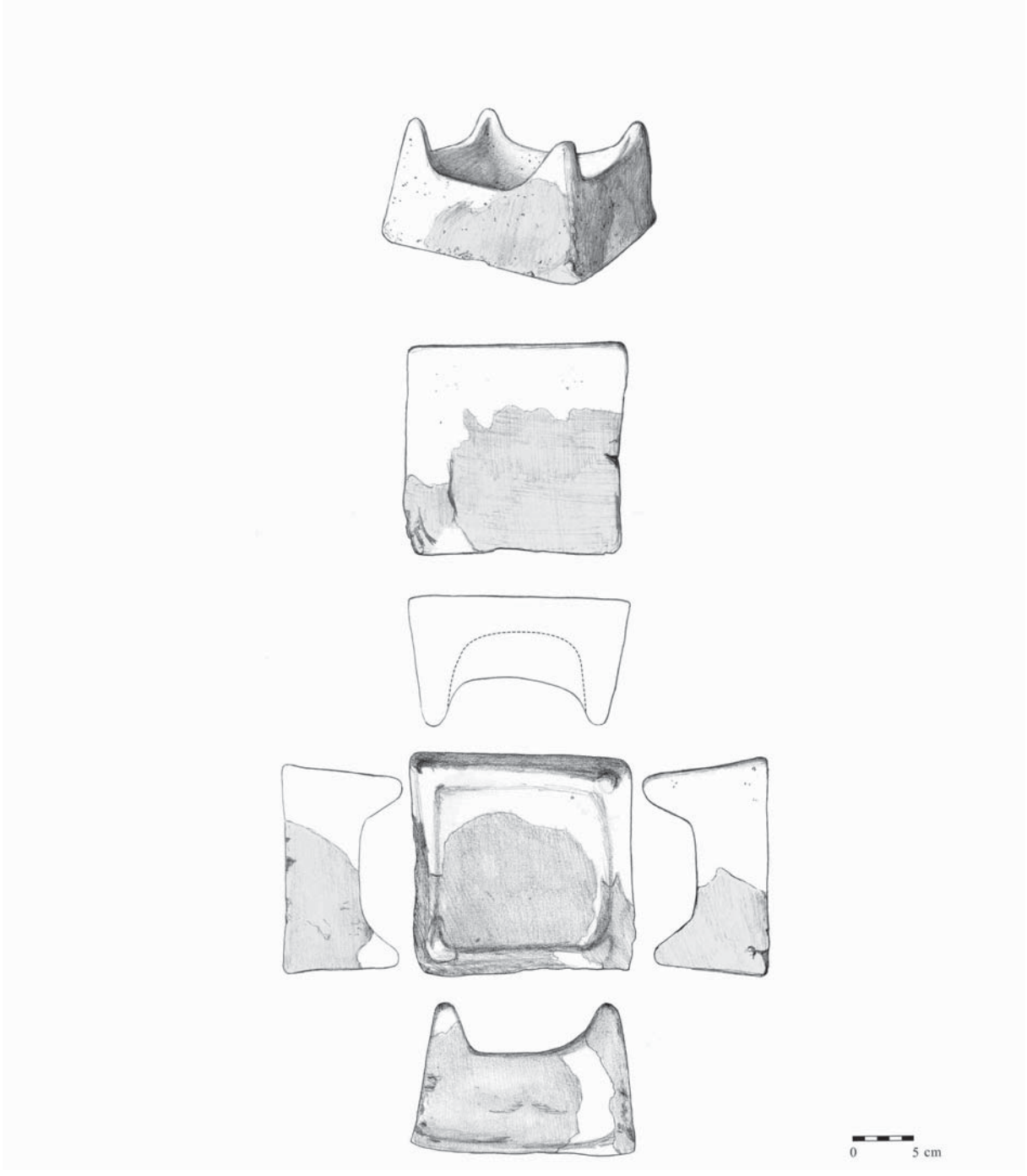


*Figure 16. Pilismarót-Basaharc. Wagon model from Grave 445*
(*drawings by Magda Éber and Ida Szathmáryné Polgár)*

# IV. BURIAL RITES AND CHRONOLOGY

Independent cemeteries can be conceptualised as ritual spaces separate from the world of the living, regulated by traditions and a reverence of the past and of the ancestors. The artefacts associated with burials, whether placed in the graves or found in the cemetery, were part of this ritual space. Unusual or prominent features of the landscape (such as a mountain, a larger body of water, a river, and the like) probably played a role in the selection of the burial ground in ancient cultures since they signified and embodied the separation of life from death and of this world from the otherworld.

We know little about the beliefs of the Late Copper Age, just as we must often resort to educated guesses about the one-time function of various artefacts; however, we can be quite certain that the articles found in the graves, the artefacts recovered from a cemetery, were not deposited in the burials by chance and were not placed beside the deceased on a momentary whim. In the absence of written sources, we do not have even a rough idea of what a funerary ceremony looked like or whether the rules of ritual conduct were strictly adhered to, or of who conducted the funeral ceremony; we know nothing about the role played by the deceased's relatives and kin, and by the community in general. We know even less about the attitudes to death, whether the loss of a loved one was as distressing as it is today, or whether death was considered a natural occurrence in view of the relatively short life span, with the inevitable demise viewed rationally and the funeral conducted as prescribed by tradition.

While ethnographic fieldwork among aboriginal peoples has contributed a wealth of information on a wide variety of funeral ceremonies and burial practices, these intriguing customs can hardly be used as direct analogies because we have not been afforded even a glimpse of the perhaps most important dimension: the spiritual culture, the unwritten traditions and beliefs of prehistoric communities, their perception of, and attitudes towards, the world around them, their values, their social structure, or the complexities of their interactions.

Given the many uncertainties, it might seem something of a futile exercise to even attempt a venture into the "archaeology of death", but this is what we must do when we embark on the analysis of a burial ground and its graves. We can study our primary sources, the grave inventories, and the various phenomena observed during the excavation. We can turn to the findings of experimental archaeology and to the results of archaeometric studies, and we can enlist mathematical procedures and statistics, all of which can shed some light on various dimensions of the life of prehistoric communities.

However, we must always be aware that in the symbolic realm of prehistoric societies, "valuables" may have been articles that seem like insignificant trinkets to us. We can hardly project the values of our modern world into the prehistoric past. What we can do is to meticulously review what evidence we have and to gather and analyse as much reliable, well-documented information as we can. By exercising the necessary patience and by searching the database of the burials according to various criteria, I hope to have gained some new insights, to have discovered new patterns among the cemetery's burials and to have extracted sufficient evidence to challenge a few mistaken assertions made in the past.

## 1. The preliminary interpretation of the cemetery by István Torma

In his conference presentation, István Torma briefly presented his views on the burial rite practiced in the cemetery and highlighted a few interesting phenomena observed during the excavation.[391]

He described the graves as scattered cremation burials, mentioning only two burials in which the cremains (the cremated remains) had been placed in a bowl (one of these was Grave 385, the other was

[391] TORMA 1973, 484–488.

not specified).[392] The calcined bones were generally partially or wholly covered with one or more bowls (sometimes with as many as five, as for example in Grave 338) deposited with their mouth downward, and a jug or mug, or both, were generally also placed beside the bowls. More rarely, the cremains were covered with some other vessel (two-handled cordon- or knob-ornamented vessels), or with broken vessels. A small, no more than 5–10 cm deep hollow was sometimes scooped out in the ground for the cremains which had been collected at the pyre location. The burial and the grave offerings were then covered with andesite rocks gathered in the cemetery's broader area or with a small heap of earth. A sacrificial vessel was sometimes placed beside the heap of stones or earth. One of the animal figurines and the fragments of a clay rhyton, two of the more remarkable finds from the cemetery, had also been set beside the stone packing (Grave 359). The uppermost stones of the heaps tumbled down and rolled away with time and the small heaps became flatter. The earth washed down from the mountains gradually accumulated over the burial ground and the graves, which at the time of the excavation lay 120–200 cm deep, were covered by a 50–70 cm thick layer of earth by the end of the Celtic period on the testimony of various features dating from that period. The base of the stone packing lay immediately above the cremains and the rocks that had rolled down from the top of the heap lay at the same depth, meaning that if there had been a grave pit, the stones would not have rolled away.

In this preliminary report, Torma based his reconstruction and interpretation of the burial rite on the observations made during the first two excavation seasons. His field diaries were an excellent source of information from which I could gather the archaeologically observable elements of funerary activities, and thus I am able to complement his initial observations and preliminary report with additional data.

## 2. Approaches to cemetery analyses

With its high number of graves, rich grave inventories and stone-packed cremation burials, the Pilismarót cemetery remains an unparalleled burial site in the Carpathian Basin. Thus, I could hardly rely on or draw from previous analyses of similar burial grounds from this period for the contextual study of the archaeological finds or for the interpretation of seemingly uninteresting, quotidian artefacts.

The interpretation of what has survived of ritual phenomena in the archaeological record and of the artefacts from the cemetery, and the identification of possible cultural patterns was not an easy task. One of my starting points was the time of death. I examined the possible rationale behind the cemetery's location, the archaeologically visible elements of the burial rite and the typical traits of the burials themselves. I mapped the distribution of each artefact type within the cemetery in the hope that I would discover certain patterns.

In addition to the typological assessment of the artefacts recovered from the burials, I searched for other markers in order to determine the chronology of the burials relative to each other and to determine the cemetery's possible regional significance.

I encountered few difficulties regarding pottery because more or less similar or wholly identical forms and decorative elements, occasionally even an exact counterpart, could be found over an extensive territory, but this turned out to be of limited value in unlocking the cemetery's secrets. The interpretation of the other finds was more difficult, either because they were so quotidian that it seemed virtually hopeless to find analogies or, on the contrary, they lacked good counterparts in the immense number of find assemblages exactly because were unique and unusual. I also collated the typochronology with the radiocarbon dates.

I made every attempt to identify the extraordinary, unusual artefacts expressing status and prestige that would shed light on the deceased's position in the community or his/her personal importance. My

[392] Torma 1973, Abb. 1. 3. The other one was Grave 343.

assumption was that if I could determine the finds whose special role is also underpinned by other evidence, it could be reasonably supposed that the grave which contained these finds was the burial of an individual who differed in some respect from the other, average members of the community. This difference may have been spiritual, physical or perhaps one of economic wealth or power in comparison to the community's other individuals. I was aware that aside from the artefacts deposited in the graves there may have been several other symbols of status or attributes of prestige that leave no trace in the archaeological record (such as bird feathers, animal hides, textiles, wooden artefacts, ornamental or utilitarian objects woven or made from twigs or plant fibres, colours and the like). The very location of a grave within the cemetery may have expressed an individual's status.

One of my goals was to outline the cemetery's "peopling" and its regional significance by clarifying the chronological and spatial patterns in the cemetery through a meticulous analysis. Still, it must be repeatedly emphasised that given the high number of uncertainties – especially as regards the cognitive sphere – every analysis and conclusion is no more than a small strand from the magnificent tapestry of the prehistoric past.

## 3. The funeral ceremony

In the final report on the biritual cemetery of Budakalász, I strove to reconstruct the sequence of events from the moment of death to the conclusion of the funeral based on the archaeological evidence: the preliminaries to the funeral, the interment and the post-funeral activities.[393] I shall attempt to do the same in the case of the cremation cemetery uncovered at Pilismarót: a reconstruction of the funeral ceremony drawing from the information contained in the archaeological record.

### 3. 1. The preliminaries to the funeral

The first act of the funeral ceremony, the "treatment" of the deceased after the onset of death and the preparation of the body, cannot be studied because the cremation rite leaves no traces whatsoever of these activities in the archaeological record in this respect.

#### *3. 1. 1. Choosing the location of the burial ground*

The Pilismarót burial ground, the area selected as the ritual space, was located on a plain near the one-time floodplain of the Danube Bend, at the foot of the Pilis Mountains *(Fig. 8)*. The cemetery lay far from the area's currently known Late Copper Age settlements, which no doubt enhanced the mystic aura of the location near the great river and the special position of the cemetery. This may have been one of the criteria for choosing this location. There were no superimposed burials in the Late Copper Age cemetery and neither were there any indications that the burials had been looted. The Late Copper Age communities apparently showed respect for the graves marked by the stone packing – the few Copper Age burials with intrusions were disturbed when the Celtic Age settlement had been established in the same location.

The selection of the cemetery's location, the respect shown for the graves are reflections of one particular dimension of the community's attitudes towards death.

#### *3. 1. 2. Selection of the grave locations*

We know nothing about the criteria for the selection of a particular grave location. When analysing the topography of the grave goods, I found that the spatial patterning of several vessel types indicated that

[393] Bondár 2009b.

the deceased had not been interred beside one another according to the sequence of their death, but that certain individuals had been buried in a pre-allocated location within the cemetery.

The graves lay quite close to one another despite the abundant availability of space in the selected location of the cemetery. I shall return to this issue below. The association of the stones that had been dislodged and rolled away with a particular burial, the exact extent of a particular grave could not always be accurately determined during the excavation of the burial ground *(Pls 57–58)*.

*3. 1. 3. Selection and manufacture/collection of the grave offerings*

The selection of the grave location was followed by choosing the articles which would accompany the deceased and their manufacture or collection, another activity preceding the funeral itself. If the vessels placed in the grave were not hastily and haphazardly gathered from among the household vessels, the pottery and other artefacts placed in the grave had to be manufactured according to the community's traditions. Vessels fired in pits[394] could be quickly made and may therefore have been part of the funerary rite. Another decision made before the funeral was whether the deceased would be given food and beverages, as was the mode of how the food offerings should be deposited.

We do not know whether the deceased was interred with his or her personal utilitarian articles and clothing, or whether the funerary rite prescribed another practice. We have no way of knowing whether the stone axes and chipped stone implements found in some graves and the antler and the boar tusk found in others had been used as implements in life or were artefacts associated with the burial rite.

The stones and rocks needed for covering the grave after the funeral too had to be gathered before the ceremony.

*3. 1. 4. Disposal of the body*

Another decision made before the funeral was whether the deceased would be cremated or inhumed. In the case of the dead interred in the Pilismarót cemetery, this was an obvious choice for the community: they cremated their dead and buried the remains in a specific location, in accordance with the ceremony prescribed by their traditions.

### 3. 2. The funeral ceremony

*3. 2. 1. Cremation and the collection of the cremains*

Following the selection of the grave location and of the grave goods to be deposited in the grave, the body was cremated. The wood necessary for the pyre was readily available in the cemetery's broader area. A pyre can be practically built anywhere and does not require any special preparation or the felling of a high number of trees,

The cremation of the deceased, as already noted by István Torma, was not performed in the area of the cemetery because no traces of pyre locations were found during the excavation. This would suggest that the body was first transported to the pyre and that the burnt remains were gathered and then taken to the grave after the body had been cremated, indicating that the funeral ceremony was conducted according to a routine scenario.

However, we know nothing about the ritual itself, for example, of how the deceased was transported to the pyre, how the cremains were collected (whether the burnt bones were gathered in containers made

[394] BONDÁR et al. 2000, 98.

from textile, wickerwork, animal hides or clay vessels), how the container was taken to the grave and what community activities accompanied the event.[395]

From her examination of the cremains, anthropologist Kitti Köhler concluded that the deceased had been cremated at a high temperature shortly after the onset of death (see pp. 319–347), meaning that the pyre had been constructed from wood and perhaps other material in a manner to ensure a high, over 800 °C temperature and a relatively quick incineration. The duration of the incineration can only be estimated; however, experimental incinerations have shown that the cremation of a body on a pyre with a sufficiently high temperature takes about nine hours.[396]

The remains of two individuals were found in a single grave only: one of the bowls in Grave 409 was used for covering the cremains of a man. As it turned out during the anthropological examination of the cremains, the calcined bones in the bag inscribed "under vessel 4" represented the remains of a small child. The separation of the calcined bones and their covering with two separate bowls perhaps indicates that the two individuals had been cremated on the same pyre and that care had been taken to gather and deposit the remains of the man and the child separately.

The careful collection of the cremains is reflected by the fact that only in a few cases was other material mixed with the calcined bones (two burnt mussels in Grave 336, a burnt stone in Graves 340 and 343, and a lump of burnt limestone in Grave 337, while a few pieces of charcoal in Graves 365 and 454, and a larger amount of charcoal in Grave 452). At the same time, it is noteworthy that if such care was taken in the collection of the cremains, why no more than a few bone splinters were deposited in some burials (Graves 340, 413, 427, 430, 455, 456), while others contained a substantially higher amount (Graves 348,[397] 451, 453). The anthropological assessment of the human remains indicated that only the calcined remains of certain bodily regions (the skull and the long bones) were collected and deposited, a practise which undoubtedly had some ritual reason and symbolic meaning.

It would appear, then, that after the pyre had burned down and cooled, the remains of the bodily parts intended for burial were carefully selected, meaning that the cremains were treated with special care and according to certain prescriptions.

In the light of the above, it is possible that the graves that did not contain any calcined bones were symbolic burials, lacking the remains of a human body. Obviously, it is equally possible that the cremains were destroyed by taphonomic processes (including the pH level of the soil) or that very small amounts of calcined bones were not detected during the excavation, although the latter seems unlikely because even the tiniest bone splinters were carefully packed away and there was no indication of the harmful properties of the soil in the burials that had contained cremains. The fact that over one-third of the burials lacked even a tiny bone splinter is an intriguing and noteworthy phenomenon, another cognitive element in the prehistoric perceptions of death.

### *3. 2. 2. Deposition of the cremains and the funeral ceremony*

The remains collected from the pyre were taken to the selected grave location and placed in the centre of a circular area together with the grave goods. No pit was dug for the calcined bones – they were simply strewn on the ground, as noted by István Torma in his preliminary report. The archaeological record

[395] Sándor Soproni's field notes made during his excavation of the Budakalász cemetery indicated that the size of the area where the cremains were deposited was roughly identical, suggesting that the cremains were gathered into a container made from organic material such as a basket and then taken to the grave where they were spilled on the ground by turning the container upside down and then covered by the container, whereby the cremains remained in a heap during the ensuing millennia (Bondár 2009b, 233–234).

[396] Lazăr–Băcuet-Crișan 2011, Fig. 10.

[397] István Torma collected almost 1 kg of cremains; however, these were unavailable for study because they could no longer be found.

offers no clues as to how the community bade farewell to the departed, or about the funeral procession, the community's activities when the remains were deposited, or where some of these activities took place. What we do know is that the grave inventories are made up of different numbers of artefact types and have a widely differing composition (*Table 3* offers an overview of the number of grave goods according to graves, while *Fig. 17* shows the distribution on the cemetery map).

*Table 3. Number of grave goods according to graves*

| No. of grave goods | No. of graves | Graves (italics denote radiocarbon-dated graves) |
|---|---|---|
| 0 | 3 | 404, 410, 425 |
| 1 | 10 | 342, 383, 397, 412, 417, 431, 437, 438, 440, 446 |
| 2 | 8 | 337, 347/a, 384/a, 407, 413, 421, 426, 430 |
| 3 | 11 | 343, 344, 347, 357, 389, 420, 429, 441, 452, 456, 458 |
| 4 | 17 | 341, 346, 350, 352, 356, 360, 382, *390/a*, 392, 394, 400, 406, 415, 427, 432, 436, 459 |
| 5 | 8 | 384, *385*, 398, 405, 419, 424, 428, 455 |
| 6 | 11 | 339, 348, 361, 395, 396, 408, *414*, 422, *443*, 449, 450 |
| 7 | 9 | 340, 349, 354, 387, *418*, 444, 447, 448, 454 |
| 8 | 10 | 363, 365, 386, *390*, 393, 402, *411*, 423, 433, 442 |
| 9 | 9 | 353, *358*, 362, 391, 403, 416, 435, 439, 457 |
| 10 | 5 | 338, 401, *434*, 445, 451 |
| 11 | 1 | *399* |
| 12 | 3 | *364*, *388*, *409* |
| 13 | 1 | 355 |
| 14 | 3 | 336, 359, 453 |
| 17 | 1 | 351 |

There is a widespread consensus in the archaeological literature that the vessels deposited in or on the graves during various prehistoric periods contained the food and beverages for the journey to the otherworld. This generally accepted view is discussed at greater length below.

### 3. 3. Post-interment activities

The covering or marking of the grave was most likely the final act of the funeral ceremony. Most graves in the Pilismarót cemetery were marked with a stone packing *(Fig. 5, Pls 57–58)*. The observations made during the excavation suggest that this concluding act of the funeral was performed according to certain norms.

István Torma's field diaries record that the cremains generally lay in the middle of the stone packing. A few larger stones were placed around the funerary deposit (the calcined bones and the grave goods), then smaller stones were used for creating the small heap marking the grave. In several instances, only a ring of stones was laid around the area where the cremains and grave goods had been deposited, without making a stone packing. Torma also recorded that a certain portion in the middle of a few stone-packed graves was sometimes left uncovered (Grave 344: seven larger stones, Grave 349: five to seven larger stones, Grave 358: eight to ten larger stones), or that the area strewn with the cremains was enclosed by larger stones (e.g. Graves 354, 426). Some burials lacked stones in their middle (Graves 393, 396, 444). In the case of Grave 416, the vessels had been placed under the edge of the stone packing, about a metre away from the cremains.

Torma suggested that the stone packing covering the graves had been collected in the surrounding mountains. The stone packings, whose size and form varied, had a diameter ranging between 1 and 3.5 m. He noted that the stones formed two or three layers in some cases (Graves 442, 447, 451).

The stone packing was most likely erected shortly after the deposition of the cremains on the ground, probably as part of the funeral ceremony or not long afterwards, otherwise the calcined bones would soon have been blown away by the wind or washed away by rain.

The placement of a broken vessel or vessel fragment(s) on the stone packing (Grave 409), beside it (Graves 352, 395), or on its edge was probably part of the concluding act of the funeral ceremony (or an act performed sometime later), which can be seen as a reflection of the beliefs and ritual traditions embodied by the act of intentional fragmentation (Graves 351, 354, 362, 363, 365, 403, 408, 409, 436).

It would appear that animal figurines were accorded special treatment and that they had been deposited among the stones of the stone packing during its construction. The stone packing of Grave 359 covered a roughly circular area with a diameter of *ca.* 2 m. Fragments of the animal figurine lay in part under one of the outer stones on the packing's western side, at a depth of 125 cm. The figurine was crushed into four fragments. The two fragments of the body remained roughly in their original position and an additional fragment lay some 10 cm from the head. The two forelegs were not found. Several fragments of a horn-shaped vessel decorated with a herringbone pattern likewise lay outside the stone packing, at a similar depth (unfortunately, no photos or drawings could be found of this grave). Grave 413 did not contain any pottery, save for a few indistinct sherds. An animal figurine broken in two lay by the eastern side of the stone packing *(Pl. 54. 1)*. Four fragments of an animal figurine lying 15–15 cm apart were found by the western edge of the stone packing of Grave 414 *(Pl. 54. 2)*. A broken animal figurine lay among the upper stones in the middle of the stone packing of Grave 418. It is possible that the hind leg of this figurine came to lightly under the stones near the stone packing's southern edge. A handful of sherds from three or four pots and bowls were found by the edge of the stone packing on the southern and western side. A cattle mandible broken in half lay by the stone packing's south-western edge (regrettably, these details are not visible on the grave photo).

We know nothing about possible community activities that were perhaps part of the concluding act of the funeral ceremony, whether the funeral's attendants participated in a funerary feast or placed food and drink offerings on or in the grave. This custom is certainly abundantly documented in later periods, as are the rituals associated with funerary feasts, and much could be written about it; however, my focus was on what can be gleaned from the archaeological record regarding the Pilismarót cemetery. As part of the analysis of the graves, I examined the position of the vessels in the grave as recorded in the field documentation, which might perhaps offer clues as to their one-time function. What must be noted in this respect is that the cemetery lay far from the period's settlements and that there were no indications of pyre locations, suggesting that the funerary feast was held in a location outside the burial ground, if at all. This, in turn, perhaps indicates that the realm of daily life (the settlement) and the realm of death (the cemetery) were strictly separated in the beliefs of the community (or communities) using the cemetery.

## 4. The graves

István Torma uncovered 110 graves in the Pilismarót-Basaharc cemetery, 96 (88%) of which had a stone packing, while 14 (12 %) lacked one. No cremains were found in 37 graves. With the exception of two burials, the graves containing calcined bones all had a stone packing. Cremains were recovered from 73 burials, of which the remains of 50 individuals from 49 burials were available for the anthropological assessment.

### 4. 1. Stone-packed graves

According to the field diary, thirty-five stone-packed burials lacked human remains (Graves 339, 341, 344, 351, 353, 360, 365, 384/a, 386, 389, 397, 401, 402, 405, 406, 415, 419, 421, 428, 431, 432, 433, 436, 437, 438, 439, 440, 444, 445, 447, 449, 452, 457, 458, 459).

A minimal amount of cremains were documented in sixteen burials (Graves 338, 347/a, 349, 352, 361, 385, 395, 407, 413, 423, 425, 427, 430, 446, 455, 456), of which a few bone splinters from Graves 385, 395, 423, 425 and 446 could still be found at the time the evaluation, but only the cremains from Grave 385 were suitable for analysis.

A smaller amount of calcined bones were recovered from forty-three burials (Graves 342, 343, 350, 354, 355, 356, 358, 359, 362, 363, 364, 382, 390, 390/a, 391, 392, 393, 394, 396, 398, 399, 400, 403, 404, 408, 409, 410, 411, 412, 414, 416, 417, 418, 420, 422, 426, 429, 434, 435, 441, 442, 443, 445). The cremains from Graves 342, 343, 350, 355, 356 and 362 could no longer be found when the work for this report was undertaken.

The field diary records that the cremains from Grave 348 weighed roughly 1 kg. However, we did not find these remains. The amounts of cremains recovered from the burials and the results of their analysis are shown on *Fig. 18*.

Grave goods were recovered from almost every burial: the grave inventories were made up of vessels, vessel fragments and a few other articles. Animal figurines were without exception recovered from the stone-packed graves.

The cremains were generally covered with a bowl or some other vessel (Graves 338, 350, 355, 356, 359, 361, 362, 399, 420, 427); however, in several graves, the bowls were set upside down even if there were no cremains underneath (Graves 341, 344, 352, 353, 358, 360, 382, 386, 390, 390/a, 393, 397, 403, 409, 412, 419, 422, 426, 432, 434, 435, 436, 439, 441, 442, 443, 444).

### 4. 2. Graves lacking a stone packing

Fourteen burials lacked a stone packing (Graves 336, 337, 340, 346, 347, 357, 383, 384, 387, 388, 402, 424, 448, 450; *Fig. 19*). These burials, covering a small area, show a concentration west of an imaginary north to south axis (Graves 336, 337, 340, 347, 346, 383, 384, 388) and lie quite close to one another, Grave 387 lies on the imaginary axis, while only four burials (Graves 402, 424, 450, 448) can be found in the cemetery's eastern half.

The deposition of the cremains in the burials lacking a stone packing varies. Although Graves 336, 346 and 347 had contained calcined bones according to the field documentation, these were unavailable for study because they could no longer be found. Graves 384, 388 and 450 yielded several calcined bones, while others contained no more than a few bone splinters or a few calcined bones (Graves 337, 340, 357, 383, 387) at the time of their excavation. Graves 402, 424 and 448 did not contain human remains, while the minimal cremains from Graves 337, 340 and 357 were unsuitable for an anthropological analysis.

Although the amount of cremains recovered from Graves 383, 384, 387, 388 and 450 could be examined, only the calcined bones of the individual from Grave 388 were suitable for age determination (a 15–30-year-old, juvenis-adultus individual whose sex could not be determined).

Each of these burials contained grave goods, which, in effect, outlined the grave. Graves 336 and 388 contained a rich array of grave goods, Graves 340, 346, 387, 402, 424, 448 and 450 were relatively abundant in finds, while Graves 337, 347, 383 and 384 had few grave goods. Two elements of the funerary rite could be reconstructed in the case of the graves lacking a stone packing: the first, that the

cremains strewn on the ground were covered with a bowl, the second, that although some graves lacked a stone packing, they had nonetheless been marked with a few larger stones.

The calcined bones were most often covered with a bowl (Graves 336, 337, 340, 346, 347, 383, 384, 387, 388), suggesting that the cremains had perhaps been gathered into these bowls and then simply turned upside down in the designated area, after which additional vessels were placed around the remains of the deceased *(Pl. 59. 1)*. The cremains covered with a bowl that was already broken at the time of its deposition in Grave 383 were enclosed by six stones arranged in a semi-circle, while Grave 388 was enclosed by four stones.

The grave inventories of the burials lacking a stone packing included several uncommon or unusual items such as miniature vessels (Graves 387, 388), a clay spoon (Grave 387), a dish-pot (Grave 388), an amphora fragment with a herringbone pattern (Grave 357), and stone axes (Graves 336, 340, 387). Grave 387 stands out from among the burials lacking a stone packing with its high number of remarkable artefacts.

There was no obvious chronological difference between the stone-packed burials and the ones lacking a stone packing.

### 4. 3. Food and drink offerings

According to the observations recorded in the field diaries, the vessels generally interpreted as food or liquid containers such as bowls, mugs and jugs were often deposited upside down even when they were not used for covering the cremains. This would suggest that these vessels had not contained food or beverages, or that they had been emptied if they had. Regrettably, we lacked the resources to have these vessels analysed for possible residues of their one-time contents and therefore we do not know what had been stored in them prior to the funeral, whether they had contained anything at all, or whether they were simply grave pottery.

Although we have no data on what the bowls, mugs and jugs deposited in the burials had contained, we do know how they had been placed in the burials. The following observations were made regarding the stone-packed graves:

Grave 338: four or five bowls set upside down, with the calcined bones lying underneath or beside the vessels;
Grave 340: a mug set upside down, although it was not recorded whether the single calcined bone found in the burial was covered by this vessel *(Pl. 60. 1)*;
Grave 341: fragments of a bowl and a cup, both set upside down, in the burial lacking any cremains;
Grave 344: fragments of a bowl and a pot, both set upside down, in the burial lacking any cremains;
Grave 350: the calcined bones were covered with a bowl;
Grave 352: fragments of two bowls placed on one another upside down under the stone packing in the burial lacking any cremains;
Grave 355: three bowls covered the cremains;
Grave 356: a large bowl covered the cremains, and there was another bowl set upside down in the grave;
Grave 358: two bowls deposited upside down, although it was not recorded whether the cremains were covered by these vessels;
Grave 359: the cremains were covered with several bowls;
Grave 360: a bowl set upside down in the burial lacking any cremains;
Grave 361: fragments of a bowl set upside down, covering a few calcined bones;

Grave 363: the cremains were covered with a bowl;
Grave 382: a jug and a broken bowl, both set upside down, although it was not recorded whether the cremains were covered by these vessels *(Pl. 60. 2)*;
Grave 386: a bowl set upside down in the burial lacking any cremains;
Grave 390: a large amphora set upside down, although it was not recorded whether the cremains were covered by this vessel;
Grave 390/a: a broken bowl deposited upside down beside the cremains;
Grave 393: a pot set upside down, although it was not recorded whether the cremains were covered by this vessel;
Grave 397: a bowl set upside down in the burial lacking any cremains *(Pl. 59. 9)*;
Grave 399: the cremains were covered with a large storage jar and three bowls;
Grave 400: two bowls deposited upside down, although it was not recorded whether the cremains were covered by these vessels;
Grave 401: two bowls deposited upside down in the burial lacking any cremains;
Grave 403: four bowls deposited upside down under the stone packing and a miniature beaker, also set upside down, by the edge of the stone packing, although it was not recorded whether the cremains were covered by these vessels;
Grave 409: two bowls set upside down, both covering the cremains;
Grave 419: a cup and two bowls placed on one another, all three upside down, in the burial lacking any cremains *(Pl. 60. 3)*;
Grave 420: the cremains were covered with two bowls and an amphora, all three deposited in a fragmented condition: *(Pl. 59. 6)*;
Grave 422: the cremains were covered with a bowl and a bowl or pot, both deposited upside down, and there was a third bowl, similarly deposited upside down;
Grave 426: a lobed jug set upside down, perhaps covering the cremains found during the washing of the finds;
Grave 427: the cremains were covered with a bowl;
Grave 432: a pot deposited upside down under the stone packing and a bowl, also set upside down, lay about 1 m south of the burial lacking any cremains;
Grave 434: a jug and a cup set upside down, but not covering the cremains *(Pl. 60. 4)*;
Grave 435: the cremains were covered with a bowl;
Grave 436: a bowl set upside down in the burial lacking any cremains;
Grave 439: a bowl set upside down in the burial lacking any cremains;
Grave 441: an intact mug and a broken bowl, both set upside down, perhaps covering the cremains *(Pl. 60. 5–6)*;
Grave 442: a bowl, broken in two, set upside down, but not covering the cremains;
Grave 443: the cremains were covered with a bowl;
Grave 444: two bowls set upside down in the burial lacking any cremains;
Grave 452: a bowl set upside down in the burial lacking any cremains;
Grave 457: a bowl set upside down in the burial lacking any cremains.

Only in the case of two burials were the cremains placed in bowls that had been set upright (Graves 343 and 385). The grave photo of Grave 385 shows that the cremains were placed in the larger bowl set upright and then covered with a smaller bowl *(Pl. 59. 2–4)*.

A similar practice could be noted in the burials lacking a stone packing. In Grave 336, the cremains were strewn in the middle of the burial and covered with two small mugs, while five bowls deposited

upside down formed a circle measuring 1 m in diameter around the cremains. A jug and a mug were set upright by the grave's southern and northern edge, and the grave inventory also included two stone axes. The two burnt mussels were probably deposited in the grave together with the calcined bones. In Grave 388, the cremains were strewn on the ground and covered with a bowl. A miniature lid lay upside down beside the bowl, while a jug set upright was found in the burial's northern part. Another jug in the grave was deposited upside down.

Very few of the bowls found in the graves had been set in an upright position; most were deposited upside down, similarly to the cups and jugs and, in some cases, to the larger vessels such as amphoras and storage jars. At the same time, Torma recorded that some jugs, mugs and cups had been deposited in an upright position (Graves 336, 337, 347, 353, 388, 403, 441). I disregarded the mugs and cups tilted to one side because these might have been dislodged from their original position by the weight of the stones. However, the jugs and mugs found upside down clearly indicate that these had not been placed in the grave as liquid containers. Only a few graves contained animal bones originating from the animal's meaty parts,[398] but the exact position of the animal bones in the grave and their position relative to the vessels were not recorded, and thus they provide no additional information in this respect.

Borbála Nagy made a number of interesting observations during her excavation of the cemetery at Balatonlelle-Felső-Gamász. The twenty-three burials yielded twenty-seven mugs, of which only the contents of one could be clearly determined: the mug from Grave 21 contained flint blades. She argued that the mugs had not been used as liquid containers because several mugs were found lying on their side (with the mouth downward) and because most mugs had a rounded base and could not be set upright. In her view, the importance of the mugs (or of their contents) was reflected by the fact that the mugs in Grave 17 lay deeper than the body and the other grave goods, indicating that these had been buried deeper than the other grave offerings.[399] A similar phenomenon was noted in Grave 21, where a jug lay deeper than the other grave goods.[400] The position of the mugs in several burials suggested that they had been strung together by their handle, which again belies their function as liquid containers. She made similar observations regarding the possible contents of jugs. One of the jugs in Grave 6 contained another jug, while the jug in Grave 17 yielded a boar tusk and a bone implement, and a bundle of mugs and flint blades were found lying under another jug. The jug in Grave 23 had been placed inside a bipartite bowl.[401] She quoted the burials uncovered at Reichersdorf for a similar practice: Christian Mayer, the excavator of the latter site, assumed that the vessels found in the burials were not containers for food and drink, but were the grave offerings proper.[402]

In my view, the vessels placed upside down in the Pilismarót burials too indicate that the deceased were not provided with food and beverages. The vessels placed over or beside the cremains in an upside-down position apparently had a different function, and were perhaps vested with a role to "preserve" or to "keep together, to protect".

[398] According to Erika Gál's species determination, Grave 359 contained a pig femur, Grave 363 cattle vertebrae, Grave 404 the meaty part of a cattle foreleg, Grave 409 a goat/sheep leg, Grave 418 a cattle mandible and Grave 422 the meaty part of a sheep/goat foreleg.

[399] NAGY 2010, 386.

[400] NAGY 2010, 390.

[401] NAGY 2010, 390.

[402] NAGY 2010, 404, quoting Christian Mayer (MAYER 1991, 44).

## 5. The "topography" of the grave pottery in the cemetery

In this section, I will discuss the spatial distribution of individual vessel types in the cemetery. I mapped each vessel and artefact type on a separate map *(Figs 20–33)*. The variety and number of the grave goods differed, reflecting a deliberate selection of what was deposited in the grave and, also, that the grave inventories were not "uniform burial packages". The articles deposited in the grave may have reflected the position of the individual in the community (a status based on sex, age, occupation or power).

My assumption was that if a particular vessel type was recovered from burials located in different areas of the cemetery, its distribution could indicate the rough contemporaneity of the graves and thus provide clues for the cemetery's "peopling". The spatial patterning of the vessel types could also outline clusters (groups) or, conversely, isolated graves, indicating that individuals with these vessels or artefacts were interred in pre-allocated locations. The abbreviations used for individual vessel types are identical with the ones in the type charts *(Figs 9–13)*.

### 5. 1. Amphoras *(Fig. 10: A1–A6)*

Eighteen burials contained amphoras in the Pilismarót-Basaharc cemetery, with some graves containing two different variants of this vessel type (Grave 390: Type A3 and A5; Grave 433: Type A2 and A4), or several examples of the same type (Graves 393, 445, 453: two specimens each of Type A2).

*Table 4. Distribution of amphoras according to graves*

| No. of amphoras in a grave | No. of graves | Graves (italics denote radiocarbon-dated graves) |
|---|---|---|
| 1 | 18 | 338, 350, *358*, 361, *364*, *399*, 400, *409*, *418*, 420, 421, 424, 428, 430, *434*, 437, 444, 449 |
| 2 | 8 | 351, 362, *390*, 392, 393, 433, 450, 458 |
| 3 | 1 | 453 |
| 4 | 1 | 445 |

The distribution of burials with various amphora types in the cemetery was rather random *(Fig. 20)*, although this randomness would be slightly denser had the indeterminate amphoras recovered from thirteen burials also been mapped (they were excluded because they did not provide additional information). A look at the distribution of the various sub-types reveals some interesting patterns.

The three burials yielding Type A1 amphoras lay in the cemetery's northern (Grave 358), southern (Grave 362) and eastern (Grave 424) part, roughly 20 m apart (Graves 358 and 362, Graves 362 and 424). Neither was the distance between Graves 358 and 424 much larger than 20 m.

Type A2 was by far the most common type in the cemetery, deposited in fifteen burials (Grave 338, 392, 393, 399, 400, 409, 418, 420, 421, 433, 434, 444, 445, 453, 458). Certain patterns can be noted in their distribution: Grave 338 was a solitary burial by the cemetery's western edge, while seven graves forming two (?) clusters can be noted along the two sides of an imaginary axis in the cemetery's middle part: Graves 392 and 393 lay immediately beside one another, and Graves 400, 399, 420, 421 and 418 on the other side were similarly located beside one another. A third cluster can be noted in the cemetery's north-eastern end (Graves 458, 445, 434, 433), and a fourth cluster is perhaps marked by two adjacent burials (Graves 453 and 444) in the cemetery's south-eastern end.

The two burials yielding Type A3 amphoras lay far from each other, but along the same imaginary axis: Grave 390 in the cemetery's western, Grave 457 in its eastern part. The same could be noted in the case of Type A4 amphoras: Graves 450 and 433 lay some 30 m apart along the same axis.

Types A5 and A6 were recovered from a single burial each (Grave 390 and Grave 351, respectively), both of which lay in the cemetery's western half.

In sum, spatial clusters can be discerned in the distribution of some amphora types, while other types had been deposited in burials lying far from one another, suggesting a pattern in their deposition.

### 5. 2. Pots *(Fig. 10: P1–P6)*

Forty-nine graves in the Pilismarót cemetery did not contain pots (the indeterminate pots were also excluded from this analysis). A number of burials contained several pots of the same type (Graves 355, 382, 398, 418, 435, 454), while others yielded vessels or vessel fragments representing different pot types (Graves 358, 388, 390, 391, 402, 405, 409, 411, 423, 442, 451, 453). Five burials contained both normal-sized and miniature pots (Grave 391, 405, 416, 451, 457). In addition to the above, the pots from the burials containing different types also included indeterminate specimens (Graves 349, 355, 360, 362, 363), which were not included in this analysis. The seven miniature pots recovered from six burials (Graves 361, 391, 405, 416, 451, 457) are discussed in the section on miniature vessels.

*Table 5. Distribution of pots according to graves*

| No. of pots in a grave | No. of graves | Graves (italics denote radiocarbon-dated graves) |
|---|---|---|
| 1 | 38 | 338, 339, 344, 346, 347/a, 348, 351, 353, 354, 356, 357, 361, *364*, 384/a, *385*, 389, 393, 394, 395, 396, *399*, 401, 413, *414*, 416, 419, 422, 432, 433, *434*, 436, 445, 447, 448, 450, 452, 455, 457 |
| 2 | 14 | 347, 349, 360, 362, 363, 382, *390*, 391, 405, 435, 442, 451, 453, 454 |
| 3 | 6 | *358*, *388*, 398, 402, 418, 423 |
| 4 | 3 | 355, *409*, *411* |

The distribution of various pot types in the Pilismarót cemetery *(Fig. 21)* reveals that Types P1, P2 and P3 are scattered across the cemetery. Type P4 was deposited in burials lying quite far from one another along a north to south imaginary line (Graves 358, 388 and 423, 402), while Type P5 in burials lying close to one another in the cemetery's southern part (Graves 409, 411, 451, 455) and in one burial in the eastern part (Grave 391). Type P6 occurs in three burials located near one another in the cemetery's eastern part (Graves 357, 382 and 385). Thus, similarly to amphoras, a spatial patterning can be discerned in the deposition of pots.

### 5. 3. Storage jars *(Fig. 10: SJ1–SJ2)*

The burials yielding storage jars lay in the cemetery's western part (Grave 341) and in its middle (Graves 384 and 399), in burials lying close to one another *(Fig. 22. 1–2)*. One would assume that this seemingly quotidian vessel would either not be deposited in burials or, if was, it would be found at least as frequently as pots; however, its distribution belied this preconception because it was recovered from no more than three burials.

### 5. 4. Mugs *(Fig. 11: M1–M7)*

Thirty-two burials of the Pilismarót cemetery yielded mugs, while seventy-eight did not. Some graves contained different types (Graves 336, 408 and 444), while others yielded several mugs of the same type (Graves 336 and 340).

*Table 6. Distribution of mugs according to graves*

| No. of mugs in a grave | No. of graves | Graves (italics denote radiocarbon-dated graves) |
|---|---|---|
| 1 | 24 | 338, 339, 343, 344, *358*, 359, 360, 361, 365, 386, 389, 392, 393, 402, 403, 406, 407, 412, 426, 431, 439, 441, 444, 448 |
| 2 | 6 | 340, 348, 353, 354, 395, 453 |
| 3 | 2 | 336, 408 |

Mapping the distribution of mugs *(Fig. 23)* revealed that they were deposited more frequently in burials in the cemetery's western half than in the eastern one. Burials with Type M1 mugs were found far apart, in a burial in the cemetery's western half (Grave 339) and in another one in the middle (Grave 408). The single Type M2 mug was recovered from a burial (Grave 336) in the cemetery's western part, while Type M3 mugs were deposited in burials lying far from one another: two burials (Graves 344 and 343) in the cemetery's western part and two burials (Graves 439 and 448) in the eastern part. The burials with Type M4 mugs formed a cluster in the western part (Graves 338, 340, 353) and a single burial (Grave 444) in the cemetery's south-eastern corner too yielded a mug of this type. Type M5 mugs were placed in two graves lying far from one another in the cemetery's southern and eastern part (Graves 412 and 441). Type M6 mugs were found in six burials: one of these (Grave 336) lay in the cemetery's western part, two (Graves 358, 393) in the middle part, while three burials (Graves 426, 407 and 408) lay roughly along the same line. Graves 407 and 408 lay fairly close to one another, but far from the other graves. Type M7 mugs were recovered from four burials: three of these lay near one another (Graves 365, 360, 386), while the fourth (Grave 406) in the cemetery's eastern part, far from the other three. The distribution of mugs thus shows some spatial patterning, similarly to the amphoras and the pots.

### 5. 5. Jugs *(Fig. 11: J1–J8)*

Jugs or their fragments were recovered from seventy-three burials, while thirty-seven graves did not contain this vessel type. Similarly to the other pottery wares, some burials contained different types (Graves 336, 388, 399, 422, 434, 435), while others yielded several pieces of the same jug type (Graves 403, 409).

*Table 7. Distribution of jugs according to graves*

| No. of jugs in a grave | No. of graves | Graves (italics denote radiocarbon-dated graves) |
|---|---|---|
| 1 | 38 | 337, 338, 349, 351, 352, 353, *358*, 362, *364*, 365, 382, 384/a, *385*, 387, 389, 396, 400, 401, 406, 408, 416, 419, 424, 426, 427, 430, 436, 439, 440, 442, 444, 445, 447, 448, 452, 453, 454, 456 |
| 2 | 13 | 336, 386, 399, 402, *409*, 415, 422, 428, 433, *434*, 435, 457, 458 |
| 3 | 1 | *388* |
| 4 | 1 | *403* |

The distribution of jugs in the cemetery *(Fig. 24)* shows that Type J1 jugs were deposited in three burials (Graves 338, 364, 403) lying far from one another: one burial (Grave 338) in the cemetery's western part, one in the middle part (Grave 364) and one in the eastern part (Grave 403). Type J2 jugs have a scattered distribution: they were deposited in several burials (Graves 388, 399, 435, 386, 387, 422, 409, 456, 457) in the cemetery's middle zone and in four burials (Graves 445, 440, 433, 444) in the eastern part as well as in four burials (Graves 427, 428, 382, 336) in the western part.

Type J3 jugs were scattered across the cemetery's entire territory (Graves 336, 352, 353, 400, 399, 436, 435, 434, 439, 419, 416, 424, 401, 406). Type J4 jugs were recovered from five burials, two of which lay far from one another in the cemetery's western half (Graves 358, 337), one in the northern part (Grave 458) and two in the eastern part, close to one another (Graves 453 and 415). Type J5 jugs were found in two pairs of neighbouring burials lying along an imaginary line in the cemetery's middle part (Graves 388 and 426, and Graves 402 and 403), as well as in a burial (Grave 447) by its eastern edge. The single Type J6 jug was recovered from a burial (Grave 385) in the cemetery's western part and the single Type J7 jug was found in a burial (Grave 452) in its southern part. Type J8 jugs were deposited in burials lying in the cemetery's middle part (Graves 384/a, 422) and eastern part (Grave 434).

In sum, some jug types show a spatial clustering, while others do not. Two jug types were deposited in a single burial only.

### 5. 6. Cups *(Fig. 11: C1–C3)*

After mapping the distribution of cups *(Fig. 25)*, I found that Type C1 cups were deposited in two burials (Graves 384 and 433) lying in two distant spots of the cemetery. Type C2 cups were recovered from two burials (Graves 365 and 441) lying far apart in the cemetery's southern part. One burial (Grave 434) yielded two Type 3 cups, and cups of this type were also found in two other burials, one in the cemetery's western part (Grave 341) and one in its eastern part (Grave 419), the latter lying close to Grave 434. The spatial distribution of cups indicates that they were deposited in graves lying far from one another.

### 5. 7. Beakers/flowerpot-shaped vessels *(Fig. 10: B)*

The two burials yielding beakers lay far from one another in the cemetery's middle part (Grave 390) and its south-eastern part (Grave 454), suggesting that the two burials containing this vessel type possible mark the cores of two future groups *(Fig. 26. 3)*. Miniature versions of beakers were recovered from two burials in the cemetery's eastern half (Graves 403 and 442), which lay *ca*. 20 m apart.

### 5. 8. Scooping vessels *(Fig. 10: S)*

The single burial (Grave 429) containing a scooping vessel lay in the cemetery's northern part, at the edge of the burial ground *(Fig. 26. 2)*, but close to the other burials in the area (Graves 428, 357, 358, 382, 389).

### 5. 9. Suspension vessels *(Fig. 10: SV)*

Three amphora-shaped suspension vessels were found in the cemetery: a normal-sized specimen and two miniature versions. The normal-sized vessel was recovered from a burial (Grave 390) in the cemetery's eastern part *(Fig. 26. 1)*, while the miniature versions from its western part, from two burials lying at some distance from one another (Graves 343, 447; *Fig. 29. 7*).

### 5. 10. Dish-pots *(Fig. 10: DP)*

Three of the burials yielding dish-pots lay in the cemetery's middle part, quite close to one another (Graves 388, 399, 364), while a fourth burial (Grave 353) lay in its western part *(Fig. 22. 3)*. The distribution of this vessel type outlined two clusters.

### 5. 11. Bowls *(Fig. 12: CB1–CB10, Fig.13: SB1–SB7)*

A look at the joint distribution of the two main bowls types, conical and semi-spherical bowls, reveals that only one of the seventeen different bowl types was deposited in some burials, while others yielded several bowl types (Graves 336, 338, 339, 352, 403, 416) or several examples of the same type (Graves 355, 439), and some burials contained both normal-sized and miniature bowls (Graves 387, 395, 409, 423, 432).

*Table 8. Distribution of bowls according to graves*

| No. of bowls in a grave | No. of graves | Graves (italics denote radiocarbon-dated graves) |
|---|---|---|
| 0 | 18 | 342, 347/a, 384/a, 389, 404, 410, *411*, 412, 413, 425, 426, 430, 431, 437, 438, 440, 458, 459 |
| 1 | 24 | 337, 341, 344, 346, 347, 357, 360, 382, 383, 384, *390*, *390/a*, 392, 397, 407, 417, *418*, 421, 427, 429, 432, 441, 446, 452 |
| 2 | 23 | 343, 348, 361, 395, 398, 400, 401, 402, 405, 406, *414*, 415, 419, 420, 428, 433, *434*, 436, 442, 444, 454, 456, 457 |
| 3 | 17 | 350, 352, 353, 356, *358*, 365, *385*, 393, 394, 422, 424, 435, 439, *443*, 445, 447, 450 |
| 4 | 18 | 339, 340, 349, 354, 362, 386, *388*, 396, *399*, 403, 408, *409*, 416, *423*, 448, 451, 453, 455 |
| 5 | 4 | 336, 364, 387, 449 |
| 6 | 3 | 338, 363, 391 |
| 8 | 1 | 355 |
| 9 | 1 | 359 |
| 13 | 1 | 351 |

The spatial distribution of conical bowls in the cemetery *(Fig. 27)* shows the following patterns: burials yielding Type CB1 bowls are scattered across the cemetery, with most in the cemetery's northern part and fewer in its southern part (Graves 452, 449 and 448). This picture could be refined if the fragments of Types CB1–3 could be more precisely attributed to one of the types. Type CB2 bowls were recovered from three burials (Graves 347, 384 and 407) in the cemetery's middle zone, while Type CB3 bowls were found in two burials (Graves 351, 340) near one another in the cemetery's western part, in a more distant burial (Grave 388) and in two burials (Graves 402, 451) in the southern part.

A single Type CB4 bowl was recovered (Grave 336). Type CB5 bowls were found in two burials (Graves 390 and 399). However, there were several indeterminate bowl fragments that could not be assigned to a specific type within the Type CB5–9 bowls.

Type CB6 bowls show a concentration in the cemetery's middle third, where they were recovered from three pairs of graves lying beside one another (Graves 365 and 362, Graves 423 and 421, Graves 443 and 444). Another specimen was found in one burial (Grave 439) in the cemetery's north-eastern

corner. However, definite clusters could not be identified, only assumed. One cluster is perhaps made up of Graves 339, 351, 343, 340, 385 and 356, the second of Graves 400, 386, 363, 362, 365, 401, 456, 423 and 421, and a third one of Graves 449, 443, 444 and 414. One of the two bowls still bearing remnants of a red slip was among these bowls (Grave 339, *Pl. 3. 1*).

The distribution of Type CB7 bowls reveals certain patterns. They were recovered from three burials (Graves 338, 351 and 346) lying beside each other and a fourth burial (Grave 358) lying nearby in the cemetery's western part, from a single burial (Grave 364) in the middle part, and from two burials (Graves 416 and 419) in the eastern part. The other of the two bowls preserving the remnants of a red slip was among these bowls (Grave 346, *Pl. 6. 4*).

Type CB8 bowls were found in burials forming two larger clusters, one in the cemetery's western part made up of burials lying beside one another (Graves 350, 351, 338, 344, 355, 427), or near one another (Graves 356, 340, 390), the other comprising burials in the middle part (Graves 386, 399, 423, 403, 432). This bowl type was not deposited in the burials in the cemetery's eastern part.

Type CB9 bowls were found in four burials in the cemetery's middle part (Graves 385 and 397 lying beside one another, and Graves 422 and 435) and in one burial (Grave 450) in its southern part.

The distribution of burials with Type CB10 bowls outlined certain clusters in the cemetery's middle (Graves 359, 395, 396, 422, 364) and southern part (Graves 451, 449, 453, 415). Some burials yielding this bowl type, however, lay apart from these clusters: Grave 388 by the cemetery's northern edge, Grave 403 in the middle part, and Grave 362 near the cemetery's southern edge.

I did not examine the distribution of the indeterminate bowls that could not be assigned to a particular type of CB1–3 and CB5–9 bowls.

The distribution of semi-spherical bowl types in the cemetery *(Fig. 28)* indicated that burials yielding Type SB1 bowls were clustered near an imaginary north to south axis in the cemetery's western (Graves 355, 356, 352, 382, 384, 385) and middle part (Graves 400, 420, 403), and that none of the burials in the eastern part contained bowls of this type. Graves 335, 352 and 356 lay beside one another, while Graves 382, 385 and 384 as well as Graves 400 and 402 lay near one another. Grave 336 lay farther from the imaginary axis, near the cemetery's western edge.

Burials with Type SB2 bowls were scattered across a wider zone in the cemetery's western (Graves 336, 341, 343) and middle part (Graves 387, 435). Graves 341 and 343 lay beside one another and Grave 336 lay in their proximity.

The burials yielding Type SB3 bowls formed three clusters: one in the cemetery's western part (Graves 338, 351, 346, 340), one by Graves 408, 402 and perhaps 450 in the southern area of the middle part, and one by Graves 416 and 433 lying near one another in the eastern part.

The distribution of burials containing Type SB4 bowls similarly outlined three clusters: one in the cemetery's western part (Graves 339, 352, 357, 358 and 429), one in its middle part (Graves 422, 403, 409 and 456), and one in its eastern part (Graves 406, 422 and 443). The graves in each cluster lay beside one another (Graves 357, 358 and 429, Graves 409 and 456) or were located no more than 10 m apart. Type SB5 bowls were found in four burials (Graves 348, 399, 445 and 419) lying far from each other in four different areas of the cemetery, as if each marked the core of a future cluster.

Although the distribution of burials with Type SB6 bowls seemed to be randomly scattered, some patterns can be noted. These vessels were recovered from burials lying beside (Graves 336, 339) or near one another (Graves 338, 354, 359, 391, 362 and 396) in the cemetery's western part, and a similar pattern can be seen in the eastern part, with some burials lying beside (Graves 447, 448) or near one another (Graves 444, 414, 449). However, three burials (Graves 403, 436 and 439) in which Type SB6 bowls were deposited lay farther from one another. Three burials yielded Type SB7 bowls: Grave 390 lay in the cemetery's western half, while Graves 416 and 434 lay beside one another in its eastern part.

## 6. Copper Age "exotica" – Reflections of status and prestige *(Fig. 14)*

I have described and discussed the "average" grave goods (various vessel types) in the previous sections and I also identified the possible spatial patterns in their distribution in the cemetery's burials.

This section will cover the rare and uncommon finds from the cemetery. The finds assigned to this category are objects to which a ritual content is ascribed in the archaeological literature owing to their anthropomorphic and zoomorphic nature, alongside various artefacts – earlier assigned to the category of miscellaneous small finds – which in the light of more recent studies can be regarded as more individualised or personal artefacts expressing or reflecting status and/or prestige.

It is no easy task to determine what counts as uncommon or unusual, and what does not. Most of the vessels recovered from the burials had been deposited in a broken condition. All were hand-thrown, and in this sense, each was a unique creation. Looking at the vessels that had survived in an intact or refittable state, the rarer types include the storage jars, the almost intact oval dish-pot, the scooping vessel and almost every bowl decorated with elaborate patterns in the interior.

Several vessel types were represented by a single piece only (e.g. Type J6 and J7 jugs), but the graves from which these vessels were recovered did not have any other unusual traits.

### Vessels

### 6. 1. Breast pots *(Fig. 9: A6)*

One special type among the amphoras is represented by anthropomorphic vessels, where the vessel body symbolises the human body and the genuine human element is added by accentuating one specific feature. Grave 351 of the Pilismarót cemetery yielded an amphora fragment on which a solid knob symbolised the female breast *(Pl. 9. 1)*.

I have discussed these vessels in detail in an earlier study,[403] in which I offered an overview of the pieces known from the archaeological literature (twenty-seven vessels from twenty-four sites), alongside a review of previous research, their distribution, their chronology, their possible function and their interpretation as well as the differences between these breast pots and other anthropomorphic vessels.[404] My main argument was that breast pots were potent symbolic expressions of female fertility and motherhood,[405] and I assumed that the pieces found in cemeteries had been deposited in the burials of the outstanding female members of a community, women "versed in the secret lore" of initiation or fertility rites.[406] Breast pots were previously generally dated to the first half of the Baden sequence (the Boleráz period and the early classical Baden period), a time period I broadened in view of the known finds to include the pre-Boleráz period (now called proto-Boleráz) and a portion of the late Baden period.[407]

At roughly the same time, Gabriel Nevizánsky also published a study on breast pots and anthropomorphic vessels. He too drew a distinction between vessels depicting female breasts and urns modelled on the human body. He listed breast pots from sixteen sites and anthropomorphic vessels from four sites.[408] He distinguished eight stylistic groups and six types among these vessels.[409] Regarding

[403] Bondár 2002; Bondár 2002a.
[404] Bondár 2002, Fig, 8.
[405] Bondár 2002, 85.
[406] Bondár 2002, 86.
[407] Bondár 2002, 86.
[408] Nevizánsky 2002, 84–89, Obr. 9.
[409] Nevizánsky 2002, 90–91.

their chronology, Nevizánsky too argued that anthropomorphic vessels were current from the early Baden period and that their presence can be noted throughout almost the entire duration of the Baden period.[410]

Several new breast pots have come to light on various sites in Hungary, Slovakia, the Czech Republic, Poland and Bulgaria since 2002, when our studies were published.[411]

Currently, a total of forty-nine breast pots (or their fragments) are known from thirty-seven sites in the Baden distribution.[412] Most came to light on settlements, a smaller portion was recovered from burials. Similar breast pots have been published from cultures that were more or less contemporaneous with the Baden complex, principally from sites in Switzerland and Germany.[413] Their presence can be traced throughout the entire span of the Baden culture.

The single fragment found in the Pilismarót cemetery was recovered from Grave 351, a burial by the cemetery's western edge *(Fig. 20. 6)*. The deposition of the vessel in but a single grave would suggest that only one individual was accorded this item, and even in this case, no more than a few fragments of the vessel were placed in the burial. The other grave goods do not suggest a special status. The burial did not contain any cremains and thus we know nothing about the person interred in the grave.

### 6. 2. Amphora-shaped suspension vessels *(Fig. 10: SV, Fig. 14. 12–13)*

I regard amphora-shaped vessels as genuine suspension vessels.[414] Suspension vessels were recovered from three burials in the Pilismarót cemetery (Graves 390, 434 and 447), one of which was normal-sized (Grave 390: *Pl. 22. 8*), the other two being miniature variants (Grave 434: *Pl. 42. 3*, Grave 447: *Pl. 46. 13*).

Graves 390 and 434 were adult burials. The normal-sized suspension amphora was recovered from Grave 390, a burial in the middle of the cemetery's western part, while the two scaled-down versions were found in Graves 434 and 447, two burials lying relatively close to one another in the cemetery's eastern part *(Fig. 29. 7)*.

The three suspension vessels represent three different types. The most archaic one is the plain, four-handled miniature vessel from Grave 434, whose best counterparts can be cited from the preceding period, from the cultures of the final period of the Middle Copper Age,[415] suggesting that this burial can be assigned to the cemetery's early phase. The miniature vessel with its upward-pointing, perforated

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[410] Nevizánsky 2002, 97–98.

[411] Balatonlelle-Országúti dűlő (Sófalvi 2004, 16, without any further details), Balatonőszöd-Temetői-dűlő (Horváth 2006, Fig. 14. 3; Horváth 2011, 22, Fig. 19), Balatonszemes-Szemesi berek (unpublished, from Szilvia Honti and Péter Gergely Németh's excavation in 1999), Csákánydoroszló (Károlyi 2004, Fig. 79. 3), Kaposújlak-Várdomb dűlő (Somogyi 2004, 166, intact breast pot; Németh et al. 2010, colour illustration on p. 48), Nagyrécse (Bondár 2008, Fig. 11. 4. fragment of a vessel with a knob pressed out from the interior), Ozora (Nevizánsky 2002, 84), Címburk (Zápotocký–Zápotocká 2001, 599, Abb. 13. 12), Dukovaný (Podborský 1989, Abb. 4. e), Vedrovice (Podborský 1989, Abb. 4. f), Nitriansky Hrádok (Nevizánsky 2002, 87), Zemplínske Kopčany (Horváthová 2010, Tab. 35. 2a-b), Pietrowice Wielkie (Furholt 2009, Abb. 89. b), Drama (Gleser 2010, Abb. 3. 1–2).

[412] Author's database. The number of sites has increased by 40% and the number of vessels by 80% during the past decade.

[413] Petrasch 1984; Schlichtherle 1997.

[414] While the subcutaneous handles on mugs, jugs and cups could have enabled the vessels to be suspended by means of a cord threaded through the handles, the poor workmanship of the vessels and the reinforcement of the handles with a clay pellet in the vessel interior suggests that they were unsuitable as containers and for safely holding whatever was placed inside them if suspended.

[415] M. Virág 2014, Fig. 7. 6.

knobs from Grave 447 represents another type: its proportions and ornamentation are typical for Boleráz vessels. Its form is perhaps best matched by an amphora from Köveskál, although the latter was found together with a footed goblet, which was more current during the classical Baden period, meaning that this burial can be assigned to a later phase in the cemetery's use-life. A similar vessel, dated to the classical Baden period, has been recently published from Bajč.[416]

In my assessment of the Budakalász cemetery, I discussed suspension vessels in detail,[417] and therefore I shall merely recapitulate the main points here. The suspension vessels of the Late Copper Age were first analysed in detail by János Banner, who assembled a map of their distribution[418] and noted that similar vessels were known from Austria too, although without quoting them all. In his study on the Anatolian connections of the Baden culture, Nándor Kalicz devoted a separate section to these vessels.[419] He distinguished two main types among suspension vessels, one with horizontally set, vertically pierced handles, often with a foot-ring, the other fitted with two vertical, tube-like handles. Němejcová-Pavúková published several amphora-shaped suspension vessels from Slovakian sites,[420] discussing these vessels at greater length in her 1991 study on the Aegean connections of the Baden culture.[421]

Several vessels of this type are known from Hungary,[422] Slovakia,[423] Reichersdorf in Austria,[424] and Vučedol in Croatia. Although the latter bears an extraordinary resemblance to the Baden vessels, it is quite certainly a creation of the Vučedol culture.[425] Suspension vessels were also made and used in the Coţofeni[426] and Kostolac[427] cultures.

In her publication of the Late Copper Age cemetery at Balatonlelle-Felső-Gamász, Borbála Nagy argued that, in line with Němejcová-Pavúková's chronological system, most suspension vessels can be assigned to the Baden III period or later. In her view, this vessel type can be expressly linked to funerary contexts, similarly to footed goblets.[428] Tünde Horváth too treated these vessels in detail, noting that several varieties of suspension vessels could be distinguished in the ceramic inventory from Balatonőszöd (cups and jugs with subcutaneous handles, amphoras, anthropomorphic suspension vessels and churns).[429] Following Němejcová-Pavúková's chronology, she assigned suspension amphoras to the Baden IIb–III.

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[416] Bistáková–Nevizánsky 2015, 434. Pl. 3. 4.

[417] Bondár 2009a, 276–277.

[418] Banner 1956, 143–146, Abb. 43. Szombathely (Banner 1956, Abb. 1), Zalaszántó-Tátika (Banner 1956, Taf. IV. 17–19, 22), Köveskál (Banner 1956, Taf. VII. 4–5), Iregszemcse (Banner 1956, Taf. XXI. 31–33), Sárszentlőrinc (Banner 1956, Taf. XXIII. 31), Piliny (Banner 1956, Taf. XXVII. 45), Kiskunhalas (Banner 1956, Taf. XXX. 23), Hódmezővásárhely-Bodzáspart (Banner 1956, Abb. 14. 7), Szentes area (Banner 1956, Taf. LVIII. 18), Oros (Banner 1956, Taf. LXXVIII. 2).

[419] Kalicz 1963, 32–35.

[420] Komjatice (Němejcová-Pavúková 1970, Taf. LXIX. 4), Beladice (Němejcová-Pavúková 1974, Abb. 72. 2), Tekovský Hrádok (Němejcová-Pavúková 1974, Abb. 60. 9).

[421] Němejcová-Pavúková 1991, 78–79.

[422] Segesd-Bogátpuszta (Draveczky 1964, Fig. 1), Esztergom-Diósvölgy (Bondár 1987a, Fig. 3. 2), Budakalász (Bondár 2009, Pl. 21. 44/1, Pl. 139. 361/1), Balatonlelle-Felső-Gamász, cemetery (Nagy 2010, Abb. 34. 7), Balatonőszöd-Temetői-dűlő (Horváth 2011, 24–28, Figs 21–26).

[423] Bajč (Nevizánsky 1987, 646. Obr. 3), Rúban (Němejcová-Pavúková 1991, Abb. 12. 2).

[424] Neugebauer–Gattringer 1986, 74; Hahnel 1992, 84.

[425] Durman 1988, Cat. no. 73.

[426] Roman 1977, Taf. 43.11.

[427] Gomolava 2002, 215, 286.

[428] Nagy 2010, 403, Abb. 34. 7.

[429] Horváth 2011, 15, 17, 19, 21–22, 24–29, 44.

While gathering material for a study on the burials of the Baden culture, I came across a suspension vessel known from Ferenc Tompa's description, which has escaped the attention of prehistorians: "A tall-necked vessel with a deep groove across its base from Rákoscsaba was presented to the National Museum in 1912. The deep groove and the vessel handles served the suspension of the vessel by means of a cord threaded through them. A wholly similar vessel is known ... from the Tátika site."[430]

Although some suspension amphoras have come to light from well-documented contexts on settlements and from burials, most are stray finds without a secure context. Their one-time function remains unknown, and it is uncertain whether they had in fact been suspended during their use and what had been stored in them.

The amphora-shaped suspension vessels from Pilismarót provide additional evidence that this vessel type had appeared by the early Baden period and that it had been deposited in both inhumation and cremation burials, even if very rarely compared to the other vessel types placed in graves,[431] suggesting that vessels of this type were accorded to few individuals in death.

### 6. 3. Miniature vessels *(Fig. 14. 1–19)*

A high number of miniature vessels were recovered from the burials of the Pilismarót-Basaharc cemetery: twenty pieces from eighteen burials. The burials yielding miniature vessels lay in the cemetery's middle (Graves 361, 388, 391, 395) and eastern part (Graves 387, 432, 423, 409, 403, 457, 451, 405, 434, 443, 444, 416, 442, 447). Even though it would be somewhat far-fetched to distinguish clusters, it is nonetheless striking that miniature vessels were usually deposited in burials lying beside (Graves 451 and 457, Graves 443 and 444, Graves 442 and 447) or near one another (Graves 391 and 361, Graves 395, 387 and 423, Graves 403 and 405, Graves 434 and 416; *Fig. 29*).

There is no generally accepted definition of miniature vessels in Central European archaeological scholarship: the label miniature is used as a synonym of small-sized, but there is no consensus of how small is small.

Alenka Tomaž devoted a separate study to the twenty-eight miniature vessels brought to light at Čatež-Stredno, a Neolithic settlement on the Sava in Slovenia, which yielded a strikingly high number of these small vessels compared to other contemporaneous sites.[432] The assessment of the finds from the 31-hectare-large area investigated between 1998 and 2002, which include the 68,000 vessels and vessel fragments, was still in progress at the time the study was written, and thus she focused on the most striking features. She sought an answer to three questions: What exactly are miniature vessels? What exactly is a vessel? How do we define a vessel? She regarded the scaled-down versions of normal vessels with a diameter or height of less than 6 cm as miniature pieces, noting that most of the settlement's vessel types had been reproduced in miniature form too.[433] These miniature vessels were recovered from several settlement features, although not from all, and they showed a concentration in the settlement's central part. She concluded that the size of the miniature vessels found on the settlement had a symbolic meaning.[434]

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[430] Tompa 1942, 32, without an illustration. Inv. no. HNM 1/1912/2. Sadly, the vessel can no longer be found in the collection of the Hungarian National Museum. I would here like to thank Ildikó Szathmári for her help.

[431] Found in two inhumation burials of the 436 graves uncovered at Budakalász (Bondár 2009, Pl. 21. 44/1, Pl. 139. 361/1), and one inhumation burial excavated at Balatonlelle-Felső Gamász (Nagy 2010, Abb. 34. 7).

[432] Tomaž 2005, 264.

[433] Tomaž 2005, 264, Figs 4–5.

[434] Tomaž 2005, 264.

Anna Simandiraki-Grimshaw examined the miniature vessels from Petras as part of the "Miniature Vessels in Minoan Crete" project launched in 2006. Her research covers the technical aspects of the production of these vessels, their variability and the archaeological contexts in which they were found.[435]

The possible symbolic meaning and significance of miniature vessels have attracted much scholarly attention and several studies have addressed the function and role of diminutive size vessels.[436] In Hungarian archaeological scholarship, the scaled-down versions of various vessels are generally interpreted as ritual finds or toys. Various aspects of the concept, meaning and significance of "miniaturisation" have more recently received much attention and have been explored in archaeological research,[437] and the prominent role of miniature vessels in funerary rites is becoming exceedingly clear.[438]

Despite the abundant research on the Boleráz period and a wealth of published reports from extensively investigated sites, there are few analogies to the miniature vessels (pots, mugs, beakers, bowls and suspension vessels) found at Pilismarót from other Boleráz sites. This would suggest that miniature, scaled-down vessels were probably uncommon, unusual articles during that period.

The age of the deceased interred in the graves containing miniature vessels could be determined for seven burials. The anthropological data indicate that miniature vessels were deposited in adult graves (two of which were male burials). The evidence from the Pilismarót-Basaharc cemetery thus clearly challenges assumptions that miniature vessels were toys – they were clearly funerary goods associated with adult burials.

## Miscellaneous clay artefacts

### 6. 4. Stamp *(Fig. 14. 20)*

Several studies have been devoted to these relatively infrequent artefacts coming in many shapes and sizes, characterised by a wide range of patterns on their face. There is a general consensus that these small objects were used for a variety of purposes such as body painting, decorating textiles or marking sacred bread, in other words, that their primary function was essentially decorative in nature. The single stamp of the Pilismarót cemetery came to light from Grave 427 *(Fig. 30. 1)*.

A good overview of previous research on stamps can be found in Szilvia Fábián's study alongside a list of then known examples[439] and the publication of a new stamp.[440] More recently, Kalicz has re-published the pieces known from Hungary, Slovakia, Austria, Croatia, Slovenia and Italy, together with a newly-found stamp from Petrivente in County Zala. His catalogue is essentially made up of the stamps from the close of the Middle Copper Age, the so-called proto-Boleráz period, and from the ensuing Boleráz period. He listed thirty-seven stamps from twenty-seven sites[441] as well as a number of other pieces, although without including a drawing of the latter. Several types could be distinguished among the newly-published[442] and already known stamps,[443] whose majority dated to the proto-Boleráz period in Kalicz's view. The stamp from the Pilismarót-Basaharc cemetery can be clearly assigned to the

[435] SIMANDIRAKI-GRIMSHAW 2007.
[436] RAMMER 2010; KOHRING 2011; BALEN–MIOČEVIĆ 2012.
[437] In 2015, one of the issues of *World Archaeology* was devoted to various aspects of miniature vessels and miniaturisation.
[438] ALLEN 2006; COLIN et al. 2014; NANOGLU 2015; GOŠIĆ–GILEAD 2015.
[439] FÁBIÁN 2003.
[440] Balatonkeresztúr (FÁBIÁN 2003, Fig. 1).
[441] KALICZ–HORVÁTH 2010, Abb. 4. 1–3, Abb. 9–10; KALICZ 2011, Fig. 1. 1–3, Figs 2–3.
[442] KALICZ–HORVÁTH 2010, Abb. 4. 1–3.
[443] KALICZ–HORVÁTH 2010, Abb. 9, 10; KALICZ 2011, Figs 2–3.

Boleráz group, as can the pieces from Bajč, Vrbove, Piliny, Zwendorf, Znojmo and Nitriansky Hrádok-Vysoky Breh.[444] In his study on the stamps of the Copper Age, Kalicz noted that stamps first appeared during the proto-Boleráz phase/group marking the transition to the Late Copper Age and that their use spanned the entire duration of the Boleráz period. He distinguished two major types: stamps with a rectangular face and stamps with a round one. He pointed out that the use of stamps declined by the time of the classical Baden culture.[445] A conical stamp with a rectangular face bearing a pattern of touching, elongated lozenges has been published from Tura,[446] and two stamps were found during the excavations at Balatonőszöd: a conical piece and a fan-shaped one.[447] In her study on magical devices as expressions of the Transcendent, Horváth too published a list of Central European stamps, principally based on János Makkay's book,[448] which she complemented with the new finds.[449] She interpreted these artefacts as ritual devices, ascribing to them a decorative function (body painting, bread stamping), but she also quoted György Cseplák, according to whom these artefacts may have been used for grinding substances such as pigments, suggested by the traces of use-wear and the remnants of red pigment on their face.[450]

The currently known stamps were either found on settlements or their find context is not known. The single piece from a burial is the stamp from Pilismarót-Basaharc, dating from the Boleráz period. The current evidence suggests that the end of the Boleráz period marked the end of the use of stamps for a long time. Stamps began to be used again in the Iron Age: a broken stamp resembling the one from Pilismarót, allegedly found at Piliny,[451] has been recently published.[452]

Most of the works covering stamps focus on the description of the objects, their ornamental patterns, the traces of use-wear and possible remnants of pigments as well as on their possible function(s). Another line of enquiry was a comparison with the stamps of Greece and Asia Minor. These studies were essentially organised around an overview of the history of research, a typological analysis and an identification of their function.

More recently published studies in the archaeological literature – many of them appearing at roughly the same time – have adopted a broader perspective and a different approach to these artefacts.[453] The main focus is no longer on the classification of ornamental motifs or the distribution of stamps, but

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[444] Kalicz–Horváth 2010, 421.

[445] Kalicz 2011, 203.

[446] MRT 11, Site 22/14, 463, Pl. 12. 1.

[447] Horváth 2006, Fig. 21; Horváth 2008b, Abb. 18; Horváth 2010b, Abb. 17; Horváth 2011, Fig. 59, top; Horváth 2013, Fig. 19. 1–2.

[448] Makkay 1984.

[449] She does not quote Nándor Kalicz's studies.

[450] Horváth 2013, 150, note 64. Her suggestion that the stamps might have been used for grinding pigment (such as ochre) is interesting, although it seems impractical to have used stamps with their elegantly decorated face for grinding. She also asserts that "according to archaeological observations, the use of stamps can be associated with funerary ceremonies and fertility rites" (Horváth 2013, 149), but without citing the archaeological evidence.

[451] István Torma kindly provided the following additional information about this stamp: the stamp was first exhibited at Gyula, as part of the exhibition "The Scythian Age on the Great Plain", and it was described under Cat. no. 194 as an Iron Age stamp by Tibor Kemenczei in the catalogue accompanying the exhibition. Apparently, neither Tibor Kemenczei, nor Júlia Kisfaludi was familiar with János Makkay's book (Makkay 1984). József Hampel had published genuine Scythian stamps from Piliny (Hampel 1876, Abb. 86–96, 98–106), which do not include any Copper Age pieces, and thus its actual provenance from Piliny is dubious. An assortment of finds from various sites were inventoried in the Hungarian National Museum in the 1960s (the stamp was inventoried under inv. no. 61.16.68 together with other artefacts).

[452] Kisfaludi 1997, Abb. 6. 6.

[453] Prijatelj 2007; Skeates 2008; Naumov 2008; Ştefan 2009.

rather on their interpretation and on their demonstrable meaning and how they were used, in part based on the findings of experimental archaeology.

In a study reviewing the most important works on Neolithic stamps during the past sixty years, Agni Prijatelj criticised both the positivist and the diffusionist approach in the study of these of artefacts,[454] demonstrating that most inquiries into the decorative motifs and the distribution of stamps generally ended with conclusions on their being part of a Neolithic package, while adding little to questions of origins and the interaction between communities.[455] Prijatelj's critical and overtly provocative study challenges some basic tenets, which might seem self-evident, but have not been expressly voiced previously. She experimented with impressing patterns with replica stamps on three different substances: unbaked bread (or rather, flatbread), textile and the human skin. She found that motifs stamped on unbaked, unleavened bread would be clearly imprinted, but that the motifs would become less visible after baking owing to the air bubbles appearing in the dough during baking. In the case of textiles, she found that they could be stamped if the textile was placed on a solid flat surface and if the stamp had a level surface, a condition that was rarely met because most stamps either have a pattern in high or low relief. Even more important is whether Neolithic communities knew how to fix dyes on textiles in order to prevent discolouration upon contact with water. Being soft, human skin proved to be suitable for stamping with patterns. The question in this case was on what occasions do people adorn their body with stamped patterns, and how many stamps and how much pigment would be needed? In sum, Prijatelj's experiments indicated that stamps were unlikely to have been used on flat and solid surfaces (such as walls and textiles) and quite likely to have been employed for stamping soft substances.[456] From her examination of the imprints, marking role and symbolism of stamps she concluded that the patterns appearing on walls, fences, textiles or any other surface became personalised expressions of identity if an anthropomorphic or zoomorphic content or some other trait alluding to age, sex or an individual trait was associated with them.[457] The secondary importance of the use of stamps is suggested by the possibility that individual markers were perhaps symbols that played an important role in the social networks between Neolithic settlements.[458]

Robin Skeates discussed sixty stamps from Italy, in particular seventeen stamps from Puglia,[459] examining their role from the perspective of the visual arts. In his view, these artefacts could be regarded as "portable art". These artefacts, variously called stamps, stamp seals, pintaderas or glyptic art, were distributed across a vast territory from South-West Asia to South-East Europe and were current over a long period from the Neolithic to the Copper Age. He notes that previous studies of these objects generally focused on typological classifications and stylistic comparisons, accompanied by speculations on their function for imprinting certain materials (such as textiles, leather, bread, clay) and their possible uses in socio-economic transactions to mark identity and ownership, or in socio-ritual performances to signify and enhance spiritual potency, by their repeated application.[460]

In his overview of the Neolithic stamps from Macedonia, Goce Naumov asserted that the basic function of stamps was decorative. Reviewing the various assumptions regarding their use, he notes that stamps are generally believed to have been used for body painting and then goes on to ask why a

[454] Prijatelj 2007, Tab. 1.
[455] Prijatelj 2007, 239–240.
[456] Prijatelj 2007, 240–242. Anyone who has seen *The Pillow Book* (1996), directed by Peter Greenaway, will recall how calligraphic signs are painted onto the human skin and how much remains of them.
[457] Prijatelj 2007, 243–249.
[458] Prijatelj 2007, 253.
[459] Skeates 2008, 190–191, Figs 1–2.
[460] Skeates 2008, 183. Agni Prijatelj cites Skeates' study, and it is hardly surprising that in knowledge of each other's work, they came to similar conclusions.

separate artefact would have been made for this purpose when tattooing could have been performed more conveniently with other tools. Although pigment remains have been preserved on several Macedonian stamps, these artefacts seem unsuitable for body painting given their small size. He cites other opinions according to which stamps were used for colouring textiles or for imprinting pottery with various patterns. While there is no evidence for the employment of stamps for this purpose in the South-East European Neolithic, stamped pottery fragments, among them a vessel fragment bearing a human figure, have been found at Tel Sabi Ayad in Syria,[461] suggesting that the origins of anthropomorphic stamps lay in that region. The figure stamped on the vessel perhaps represented the owner or was a symbol of a person protected by the gods. The "decorative Neolithic alphabet" eased communication between a family and the community, or between settlements in a broader region.[462] Naumov also examined the types of artefacts on which the patterns borne by stamps occur (such as vessels, figurines, various ritual artefacts). He distinguishes a special group of stamps, namely human and animal stamp figurines with a patterned head or legs bearing incised/engraved motifs that could have been used as stamps.[463] He also explored whether the patterns on the stamps occur on other mediums such as painted walls and reliefs.[464] Clay models of bread loafs bearing stamped patterns and ritual symbols have been found at Çatal Höyük and various Bulgarian sites,[465] and clay bread loaf models were also brought to light in Macedonia.[466] From his meticulous analysis of stamps, Naumov concluded that the function and the ideas conveyed by stamps remain enigmatic and that we shall probably never be able to decipher them. Stamps were distributed over a vast territory and they have been recovered from many different contexts, suggesting that they had been used for various purposes. In some cases, stamps bearing an uncanny resemblance to one another were recovered from similar contexts on sites lying at great distances from each other and we may reasonably assume that they expressed a similar meaning. It would appear that stamps were vested with a symbolic meaning and that Neolithic communities used these visual elements in their communication. Later, these signs became symbols associated with personal identity and assumed a dual function: they played a prominent role in the dynamics of social interaction and mediated the complex symbolism of human cognition.[467]

In addition to the functions mentioned in the above (body painting, imprinting or marking various objects), Eduard Ştefan suggest that the patterns borne by stamps had an anthropomorphic association and were used for imprinting personal identity, especially in the case of stamps with a spiral pattern.[468]

The imprints of the Late Copper Age stamps of the Carpathian Basin do not appear among the ornamental motifs of clay vessels and neither have any other objects preserving their imprint been discovered to date.

It follows from the above and from the findings of experimental archaeology that there was not much sense in using stamps on soft materials such as textiles and on oily surfaces such as the human skin, leaving a wide berth for other interpretations and a search for other functions. There seems to be a growing consensus in archaeological scholarship that stamps were artefacts associated with personhood and that they were personal markers. The endowment of the individual with the right to stamp was not a new phenomenon: the use of stamp seals and cylinder stamps in the "cradle of civilisation" was a

[461] Akkermans–Verhoven 1995, Fig. 13.
[462] Naumov 2008, 186.
[463] Naumov 2008, Fig. 9, 194–196.
[464] Naumov 2008, Fig. 10.
[465] Naumov 2008, Fig. 15.
[466] Naumov 2008, Fig. 16.
[467] Naumov 2008, 201.
[468] Ştefan 2009, 151.

long-established means of marking goods and personal property as well as for conveying and expressing other functions associated with the individual.

It seems to me that the stamp found at Pilismarót can definitely be associated with personhood. The individual interred in Grave 427 was buried *together* with the artefact *(Pl. 40. 3)* which had perhaps been exclusively used by that person for marking goods that had been valuable to the entire community, or for imprinting personal or community goods, or for transferring the symbols expressing the community's cohesion to certain articles or to a symbol of power. Following this person's demise, no other was allowed to use this device. The stamp deposited in the burial was not an artefact used for body painting, for decorating textiles or for imprinting sacred bread, but the device/prestige item (?) of a person authorised to "imprint", which expressed a distinguished status.

### 6. 5. Clay cones *(Fig. 14. 21–24)*

While these artefacts might appear to be stamps at first sight, this interpretation can be definitely rejected because unlike genuine stamps, the base of these artefacts with which the pattern could have been imprinted is not decorated. A function as loom weights and sinkers occurring abundantly in almost every prehistoric period can also be excluded since they differ from these in that they are unperforated.

The four burials yielding clay cones *(Pl. 35. 11, Pl. 43. 5, Pl. Pl. 45. 2–3, Pl. 48. 18)* lay in the cemetery's south-eastern part *(Fig. 30. 2)* and appear to form two clusters (Graves 451 and 443, and Graves 416 and 442).

There are few analogies to these unusual objects. A comparable clay cone decorated with a herringbone pattern, also assigned to the Boleráz group, has been published from Nyergesújfalu.[469] According to the description, the pyramidal clay artefact has a crescentic top and its sides are decorated with a herringbone pattern.[470]

Němejcová-Pavúková cited a stray find from Kamenin-Várhegy[471] as a parallel to the clay cone fragment from Cervený Hrádok (Feature 7/G);[472] the decoration of the former shares several similarities with the piece from Pilismarót. She did not discuss this artefact type at greater length, but merely noted that they resemble the loom weights and sinkers with a perforation through their upper third known from various prehistoric cultures.[473] She published one-half of a broken clay cone with decorated top from Nitriansky Hrádok,[474] but this piece bears little resemblance to the Pilismarót ones.

A small fragment is known from Bajč-Vlkanovo, recovered from a settlement feature, which was described as a pyramidal figurine decorated with a wolf tooth pattern and interpreted as a ritual artefact. The pieces from Nyergesújfalu and Kamenin-Várhegy were cited as comparable finds.[475]

Similar clay cones painted with bitumen instead of an incised pattern can be quoted from the Early Neolithic in Bulgaria. They were interpreted as some sort of ritual devices by the excavators.[476]

The function and the distribution of these small quotidian artefacts have attracted little attention in research, and neither has their possible use or the chronology of the currently known pieces been

[469] MRT 5, Fig. 41.

[470] Balassa Museum, Esztergom, inv. no. 55.911.1 (Ő 1158). The entry in the accessions register describes it as a fire-dog and specifies is age as dating from the Iron Age, but its findspot is marked as uncertain (H. 11.6 cm, size of base 6.6 × 4 cm).

[471] Němejcová-Pavúková 1974, Abb. 53. 2.

[472] Němejcová-Pavúková 1974, Abb. 26. 3.

[473] Němejcová-Pavúková 1974, 298.

[474] Němejcová-Pavúková 1964, Obr. 25. 10.

[475] Bistaková–Nevizánsky 2015, 435, Pl. 2. 1.

[476] Koukouli et al. 2007, Fig. 23; Ганецовски 2007, Tabl. 17. 1.

studied.[477] The deposition of the five cones in burials undoubtedly reflects their unusualness. In my view, these artefacts were perhaps also material expressions of identity, as indicated by their placement in the grave regardless of their broken condition – whatever their function had been in life, their use came to an end with the demise of the individual possessing the device, suggesting that these clay cones were prestige items. One of the radiocarbon-dated burials (Grave 443) yielded a cone for which we now have a reliable date.

### 6. 6. Spindle whorls *(Fig. 14. 25)*

Spindle whorls and spools were objects used in spinning and weaving. Although often used as synonyms in some publications, they had a different purpose and thus a precise usage of each term is crucial. Spindle whorls were an accessory of spinning using a spindle, a rod onto which the bundle of fibres was attached from which the yarn was spun. Spindle whorls were used for increasing and maintaining the speed of the spin.[478]

The two spindle whorls from the Pilismarót-Basaharc cemetery were recovered from a single burial (Grave 364; *Pl. 16. 1*), the burial of an adult woman, whose grave goods included also a zoomorphic vessel handle. The grave lay in the cemetery's middle part *(Fig. 30. 4).*

### 6. 7. Rollers *(Fig. 14. 26–29)*

These small artefacts, typical for the early Baden period, that have been recovered from both settlements and cemeteries over the extensive Baden distribution are generally described as spools.[479] Vertically perforated pieces, i.e. genuine spools, are only known from Nitriansky Hrádok.[480] None of the specimens from Pilismarót-Basaharc are perforated and these cylindrical objects are therefore designated as rollers.

Three different types of rollers were deposited in the graves, with some burials containing several pieces of the same type: six rollers in Grave 401 *(Pl. 29. 1)*, four in Grave 411 *(Pl. 32. 8*) and four in Grave 439 *(Pl. 44. 2)*. The burials containing rollers lay in the cemetery's eastern part, spaced relatively far apart, and forming clusters of two graves (Graves 411 and 401, and Graves 434 and 439, respectively) that lay quite close to one another *(Fig. 30. 3)*. Similar "clusters" could be noted in the distribution of burials containing clay cones *(Fig. 30. 2).*

The few calcined bones from Grave 411 were unsuitable for sexing or for age estimation, while the cremains from Grave 434, yielding a single roller *(Pl. 42. 1)*, came from an adult individual (the other burials did not contain cremains). The grave goods from Grave 434 included also a miniature suspension vessel which, as we have seen above, can be assigned to the cemetery's early period. The other burials yielding rollers had an average assortment of grave goods.

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[477] Tünde Horváth cites the clay cones from Pilismarót, describing them as parts of house models depicting pile dwellings (Horváth 2010b, 100; Horváth 2013, 145). In my view her interpretation of the clay cones and of the similar finds cited as parallels is wholly mistaken because these clay cones differ substantially from the flat, richly adorned house or altar models. Additionally, the pieces from Pilismatót were recovered from burials, which would belie an interpretation as a house model.

[478] István Torma kindly called my attention to how spinning yarn with a spindle, for which spindle whorls were a necessary accessory, was still practiced in Moldavia up to the twentieth century. I am most grateful to him for clarifying this point. For archaeological contexts, see Capitani–Leuzinger 1998, Taf. 3. 10 (Arbon-Bleiche 3) and Kültepe 2011, Cat. nos 182–183 (Kültepe).

[479] I have already noted that the term "spool" is incorrect because the currently known spool-like artefacts are not perforated and were not devices around which yarn was wound, but are solid rollers of varying thickness.

[480] Němejcová-Pavúková 1964, Obr. 25. 5.

These cylindrical artefacts with a slender or chunkier body ending in two flat discs were current from the Early Copper Age to the Late Bronze Age over a vast territory. However, few have been recovered from well-documented contexts from excavated sites.

I have already discussed these unusual little artefacts in connection with wagon models,[481] in my assessment of the similar finds from the Budakalász cemetery[482] and in a study specifically treating these artefacts in which I reviewed the known pieces.[483] Most rollers came to light on settlements. They are known from the period preceding the Baden complex, from the Funnel Beaker culture of Poland.[484] Comparable pieces have been reported from Bulgaria,[485] Romania,[486] former Yugoslavia,[487] Austria,[488] Slovakia,[489] Bohemia[490] and various Hungarian sites[491] as well as from the Aegean, Anatolia and the Near East.[492] In my previous study, I reviewed the various suggestions on their possible uses and the evidence for their possible functions, and I shall only recapitulate the main points here.

Based on my examination of the wagon model from Szigetszentmárton, I suggested that some rollers may have been structural elements of wagon models, symbolising the combination of the axle and the wheels, a possibility supported by some of the known metal wagon models.[493] Another possible function is indicated by the similar artefacts used as gable ornaments on house-shaped urns from Anatolia, and by the decorative mosaics created from painted clay cones driven into the walls of buildings in the ancient Near East (*Stiftmosaik*).[494] Another possible function is illustrated by a clay figurine found at Gilat (Jerusalem), dating from 4500–3800 BC, portraying a naked woman sitting on a stool, holding a roller-like object under her left arm and balancing a churn-like vessel on her head. The portrayal no doubt had some symbolic meaning.[495]

Tünde Horváth explored the possible function of rollers in several studies. She suggested that the stone and clay rollers were used in salt production by evaporation of saline water and as pestles for

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[481] BONDÁR 2004, 15–16; BONDÁR 2006, 233–234; BONDÁR 2012a, 44–45.

[482] BONDÁR 2009a, 286–288. Grave 403 yielded one broken and four intact rollers (Pl. 156. 403/3–403/7).

[483] BONDÁR 2013, Fig. 1–2.

[484] PRZYBIL 2015, Fig. 8. 11.

[485] Slatino (COCHADZIEV 1986, Abb. 2), from the Early Copper Age.

[486] Cilnik (ROMAN 1977, Pl. 52. 27; ROMAN 1977a, Taf. 39. 10); Bocşa Montană (ROMAN 1977, Pl. 52. 30); Dubova-Cuina-Turcului (ROMAN 1977, Pl. 52. 36), all finds of the Coţofeni culture.

[487] Brza Vrba (MEDOVIĆ 1976, Taf. 5. 19, Taf. 11. 14; MEDOVIĆ 1976a, Taf. VI. 5), finds of the Cernavoda culture; Sarvaš (BALEN 2006, Tab. 58. 220–222), from the Copper Age.

[488] Mödling-Jennyberg (RUTTKAY 1995, Abb. 16. 8); Pleissing (RUTTKAY 2000, Taf. 6. 66); Schwechat (RUTTKAY 1971, Taf. A. 11), all finds of the Boleráz group.

[489] Malá nad Hronom (NĚMEJCOVÁ-PAVÚKOVÁ 1974, Abb. 54. 22–23); Nevidzany (NĚMEJCOVÁ-PAVÚKOVÁ 1974, Abb. 42. 22); Žlkovce (NĚMEJCOVÁ-PAVÚKOVÁ 1984, Obr. 22. 15), Bratislava (BAXÁ-KAMINSKÁ 1984, Tab. 2. 2); Mužla (KUZMA 1995, Obr. 80. 2); Nizný Žipov (DANO et al. 1994, Obr. 20. 3), Šarišské Michaľany (HORVÁTHOVÁ 2010, Tab. LI. 12–13, 15–16, Tab. LXVII. 9, Tab. LXXII. 2–3), Hronovce (PAŽINOVÁ 2013, Obr. 9. 16), Bajč-Vlkanovo (BISTÁKOVÁ–NEVIZÁNSKY 2015, Pl. 3. 5), all finds of the Boleráz group and the Baden culture.

[490] Cimburk (ZÁPOTOCKÝ 2000, Taf. 4. 20).

[491] Pilismarót-Basaharc, Nagykanizsa-Billa (P. BARNA 2003, Fig. 23. 13), Nagyút-Göbölyjárás (BONDÁR 2010, Fig. 6. 3), Balatonőszöd-Temetői-dűlő (HORVÁTH 2006, 105, note 38, Fig. 12), all finds of the Boleráz group and the Baden culture.

[492] RAHMSTORF 2004 (listing the rollers known at the time together with the relevant literature); RAHMSTORF 2006, 73–81; RAHMSTORF 2009; RAHMSTORF 2010.

[493] BONDÁR 2004, 15–16, Fig. 1. 3b.

[494] BONDÁR 2009a, 287; BONDÁR 2013, Fig. 4.

[495] BONDÁR 2009a, 287 (Land der Bibel 1998, Cat. no. 19); BONDÁR 2013, Fig. 5.

crushing salt based on finds from Germany and their reconstruction.[496] More recently,[497] she proposed six possible functions for these artefacts. She quotes evidence that they may have been thread spools used in spinning and weaving,[498] or stands for vessels during cooking or pottery firing,[499] or for separating vessels to be fired.[500] In her view, these cylindrical artefacts may also have been used as braid clamps,[501] or as back-rests and head-rests.[502]

In his discussion of the distribution of various commodities and innovations of the Early Bronze Age (*depas amphikypellon*, Syrian flasks, decorated bone cylinders, cylinder seals, weights, spools, scales, etc.), Lorenz Rahmstorf pointed out that rollers represented one of the many new innovations and that one particular variant may have functioned as scale weights, reflecting an advanced mathematical knowledge.[503] Pieces made from marble and *Spondylus* were probably prestige items. Discussing their other possible functions, he raised the possibility that they had been used as pestles or rubbing stones, or that they had functioned as polishers used by metalsmiths, or as the head-rest of Cycladic figurines.[504] In his view, the chunky rollers may have functioned as loom weights.[505]

As we can see, several functions have been ascribed to this seemingly insignificant artefact. Still, the low number of the currently known rollers indicated that this ceramic artefact was an uncommon object.[506] Their deposition in burials at Pilismarót and Budakalász even in a broken condition no doubt had some special reason or meaning. The occurrence of rollers in association with other uncommon finds such as wagon models, breast pots, Bratislava type bowls and churn-shaped vessels on Late Copper sites belies an everyday, utilitarian use and rather suggests an artefact vested with some special significance,[507] which could only be possessed by a select few. It would seem, then, that these artefacts too embodied some form of prestige.

### Zoomorphic finds

Zoomorphic depictions on vessels are represented by a vessel handle terminating in an animal head from Grave 364 *(Pl. 16. 2)*, which was described as a sheep head by Torma,[508] and the cemetery's single clay spoon from Grave 387 *(Pl. 20. 2)*, whose handle he interpreted as a bird depiction.[509]

Animal figurines were recovered from Graves 359, 413, 414, 418 and 451 *(Pl. 12. 2, Pl. 34. 1, 3, Pl. 36. 6, Pl. 49. 1, Pl. 51. 13)*. The wagon model from Grave 445 *(Pl. 47. 9)* and the clay drinking horns from Graves 359 and 405 *(Pl. 12. 4, Pl. 28. 5)* can be indirectly associated with animals.

[496] Horváth 2006, 105, note 38, 106, Fig. 12.
[497] Horváth 2008; Horváth 2011; Horváth 2012.
[498] Horváth 2008, Fig. 5.
[499] Horváth 2008, Fig. 4.
[500] Horváth 2008, 158.
[501] Horváth 2008, Fig. 6.
[502] Horváth 2008, Fig. 7.
[503] Rahmstorf 2006, 76; Rahmstorf 2010, 690.
[504] Rahmstorf 2006, 74.
[505] Rahmstorf 2004, Fig. 18.
[506] Bondár 2009a, 288.
[507] Bondár 2013, 611.
[508] Torma 1973, 494.
[509] Torma 1973, 494.

### 6. 8. Clay spoon

Grave 387, the burial containing the single clay spoon *(Pl. 20. 2)*, lay in the cemetery's middle part *(Fig. 30. 5)*. The grave inventory included also a miniature vessel and a stone axe as well as vessel fragments.

This simple artefact is a rare find on Late Copper Age sites. János Banner listed fragments of clay spoons from Kánya,[510] Ózd-Kőaljatető[511] and Palotabozsok.[512] A spoon fragment with a slightly curved handle resembling the piece from Pilismarót has been recently published from the hilltop settlement at Veľká Lomnica-Burbrich/Kakaslomnic [513] and Balatonőszöd.[514] These plain spoons with a long handle, modelled from a single lump of clay, differ from the decorated ladles with two perforations on the handle brought to light in the Alsónémedi[515] and Budakalász cemeteries.[516] Clay spoons have so far only been found in cemeteries.

Torma described this artefact as terminating in a bird head. His interpretation, the single occurrence of this artefact in the cemetery and the other uncommon artefacts found in association with it support the singular role of clay spoons and its significance, which remains elusive to us.

### 6. 9. Rhytons

The clay rhytons imitating animal horns are in themselves rare and exceptional finds. Their uniqueness is confirmed by the finds accompanying them. The broken rhyton from Grave 359 *(Pl. 12. 4)* lay on top of the grave's stone packing, and the burial itself yielded also an animal figurine. Only a small fragment of the other rhyton was deposited in Grave 405 *(Pl. 28. 5)*. The special status of the burial is indicated by the deposition of the fragment of a miniature vessel. Grave 359 was the burial of a young adult; Grave 405 did not contain any cremains. The burials containing rhytons lay in two different parts of the cemetery: Grave 359 in the cemetery's western part, while Grave 405 in its eastern part, both roughly in the middle of their respective areas. The two burials lay some 30 m apart *(Fig. 31. 2)*.

Rhytons made from cattle or buffalo horn were genuine utilitarian objects, used for a practical purpose. The drinking horn was one of Dionysus' attributes in later periods, and the very name of this object evokes the Persian, Scythian and Hunnic drinking horns of gold, the Avar drinking vessels, and the famed horn of Lehel, one of the tribal leaders of the ancient Hungarians.

Drinking horns (rhytons) and drinking bowls were two very different objects. Drinking horns were horn-shaped liquid containers as eloquently expressed by their English and German name (*Trinkhorn*). One group of drinking horns terminated in animal heads. The form of drinking bowls can be less easily categorised: wide-mouthed scooping vessels fitted with a handle and the well-known bull-headed cup of the Nagyszentmiklós Treasure are both often denoted as drinking bowls.

I found a good counterpart to the clay rhyton from Pilismarót among the finds from the eponymous site of the Late Neolithic Gumelniţa culture. Vladimir Dumitrescu published two drinking horns, each having a different form and ornamentation: one is long and slender with a small curved handle in the middle of the shorter side, an excellent evocation of the shape of cattle horns. It is decorated with white

[510] Banner 1956, Taf. XXI. 14.
[511] Banner 1956, Taf. LXXII. 10–11.
[512] Banner 1956, Taf. CIX. 12.
[513] Novotná–Soják 2013, Abb. 106. 1–3, 8.
[514] Horváth 2011, Fig. 57, second row from bottom, spoon handle (an exact counterpart of the handle of the Pilismarót spoon). The lack of numbering makes it impossible to cite the artefact in the customary manner.
[515] Banner 1956, Taf. XLV. 7, Taf. XLVI. 5.
[516] Bondár 2009a, 274–275.

painted bands running parallel to the vessel mouth on a red base.[517] The other clay horn is bulkier, with a wider mouth, and it was also provided with a handle. Instead of a painted decoration, this clay rhyton bears a frieze of incised chevrons combined with punctates on the vessel's upper and lower half. Its end is flat, the handle was assembled from several pieces.[518]

A fragmentary clay rhyton of the Bodrogkeresztúr culture was found at the Császártöltés 10 site in County Bács-Kiskun.[519] The drinking horn is described as a tube-like artefact with a curve towards its tapering end, decorated with bundles of combed-in lines running parallel with and perpendicular to the mouth.[520] Its mouth diameter is *ca*. 12 cm, the length of the surviving part is 24–28 cm. The finds collected from the extensive, ploughed-up site during its survey included also a milk jug.[521]

The lower part of a rhyton decorated with a zig-zag pattern was brought to light at Balatonőszöd,[522] to which Tünde Horváth cited parallels from Pilismarót[523] and Pécsbagota.[524] However, in my view, these finds do not compare well with the Balatonőszöd rhyton, which is more closely matched by the flattish drinking bowl resembling a slipper toe that was described as a clay shoe, as the fragment of an anthropomorphic figurine from the Boleráz settlement investigated Cimburk.[525] Horváth likened the Balatonőszöd fragment to *Triton* shells;[526] in her view, "the Pilismarót fragment ... imitates the form of *Dentalium badense*, rather than *Triton* conch trumpets."[527]

Clay drinking horns are known from later periods too, for example from the Late Bronze Age;[528] one particularly fine example crafted from bronze comes from northern Poland.[529] The few cited examples attest to the use of drinking horns over a long period during prehistory. Animal horns were vested with a practical function as drinking vessels, whose imitations were made from clay, bronze, ivory, silver, gold, wood and leather by skilled craftsmen. Although rhytons were essentially vessels, their use can be associated with the special secondary exploitation of animals – instead of slaughtering the animal solely for its horn, a clay copy was made of it that was eventually deposited in a burial. The clay drinking horn was adorned with the same decorative motifs as the ones used for embellishing vessels, which would again confirm that decorative motifs were used for conveying a community's culturally significant concepts.

The observations made on certain sites of the Baden complex have led to a generally accepted view that cattle were ritually slaughtered in masses, which was in turn interpreted as an indication of this species' worthlessness and expendability because cattle herds could be reproduced in sufficient numbers.

There is no sign that cattle were slaughtered in the Pilismarót cemetery where, instead, a clay imitation of a cattle horn was placed in the grave. The question naturally arises, what were genuine cattle horns used for?[530] Were they used as drinking vessels during the community's ceremonies and on festive

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[517] Dumitrescu 1974, Fig. 83.
[518] Dumitrescu 1974, Fig. 84. Unfortunately, its dimensions are not specified.
[519] Knipl 2009, Figs 2–4.
[520] Knipl 2009, 98.
[521] Knipl 2009, Fig. 5.
[522] Horváth 2006, Fig. 20. 2; Horváth 2008a, Abb. 18; Horváth 2011, 43; Horváth 2011a, 50; Horváth 2014, 621, on the DVD.
[523] Torma 1973, Abb. 5. 1.
[524] Kalicz 2001, Abb. 4. From a site assigned to the proto-Boleráz horizon.
[525] Zápotocký 2000, Taf. 19. 1; Zápotocký–Zápotocká 2001, Abb. 13. 13; Zápotocký 2013, Fig. 27. 3.
[526] Horváth 2006, 119.
[527] Horváth 2014, 621, on the DVD.
[528] Rábacsécsény, Patice, Kecskéd, Papkeszi, Szakály, Kölesd and Szeremle (Reich 1997, Abb. 2. Liste 1), Bonyhád (Szabó–Hajdu 2011, Fig. 1).
[529] Gedł 1996, Abb. 1, Abb. 8, Abb. 9, Abb. 11.
[530] Erika Gál identified a cattle horn-core fragment in Grave 416.

occasions, did every distinguished person have a rhyton that was attached to a belt or the costume, or was this unimaginable because of a prohibition against mutilating cattle skulls? The bull cult of prehistory had a millennium-long tradition, one spectacular expression of which was the practice of hanging bull heads on houses. It is possible that this tradition survived into the Baden culture, which would explain why the drinking horn was made from clay and decorated with the motifs used for adorning vessels. We shall probably never know.[531]

### 6. 10. Animal figurines *(Fig. 15, Pl. 55)*

While several types of zoomorphic depictions were current in the Late Copper Age, very few are actually known from the Baden complex. Although I have discussed animal depictions elsewhere,[532] several new dimensions arose in relation to the Pilismarót depictions, which shall be discussed in the following.

The currently known free-standing animal figurines are small, strongly stylised statuettes modelled from clay coils that are unsuitable for a species determination. Banner published four "animal figurines", all stray finds, from Ózd-Kőaljatető.[533] He was uncertain regarding the species determination of a fifth fragment,[534] which he regarded more of a human depiction. Banner contended that the recognisable species portrayed by the small figurines modelled from clay coils were dogs and noted that although the small figurines recalled Bronze Age statuettes, the excavation on the site yielded solely the finds of the Baden culture and thus the finds collected earlier can also be assigned to that period.[535] He published a broken animal figurine from Kánya,[536] which was identified as a pig by specialists.[537]

The animal figurines published by József Korek from Salgótarján-Pécskő resembled the ones from Ózd,[538] and they were similarly stray finds collected prior to his excavation at the site. His dating of the figurines followed the same logic as Banner's cultural attribution of the Ózd figurines: he assumed that they came from the Baden occupation.[539] Korek quoted zoologists who thought to have recognised sheep and dog in the animal figurines from Ózd and Salgótarján.

According to Pál Patay, the six animal figurines from Piliny,[540] allegedly found earlier on the site, which were acquired by Jenő Nyári for his collection and then reached the Hungarian National Museum, could have originated from the Early Bronze Age occupation layers of the site, but he nonetheless assigned them to the Late Copper Age, to the late phase of the Baden culture, following the same reasoning as in the case of the figurines from Ózd-Kőaljatető.[541] Patay did not discuss the species possibly portrayed by the figurines.

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[531] The assessment of larger animal bone samples from extensive settlements will perhaps direct the attention of archaeozoologists to this problem, of the proportion of cattle, of whether there are any horns detached from the horn-cores. I am grateful to Erika Gál for her useful comments and help regarding horns.

[532] Bondár 2012a, 48–56.

[533] Banner 1956, Taf. LXVIII. 3–6.

[534] Banner 1956, Taf. LXVIII. 13.

[535] Banner 1956, 97.

[536] Banner 1956, Taf. XXI. 15.

[537] Korek 1983, 130.

[538] Korek 1968, 57, Taf. XII. 4, Taf. XIII. 1–7.

[539] Korek 1983, 130.

[540] Patay 1999, 53, Fig. 7.

[541] Patay 1999, 53. Pál Patay mentions 123 animal figurines from Piliny, which had been collected by Albert Nyáry. Forty-five figurines from Jenő Nyáry's collection reached the Hungarian National Museum (inv. no. 44/1898.109–153). An additional twenty pieces were taken to the museum later as part of his collection (inv. no. 44/1898.1845–1864), which were inventoried as unprovenanced pieces.

Tünde Horváth addressed various issues of animal depictions in several studies.[542] In her article on Late Copper Age animal burials, she reviewed the archaeological evidence according to species and quoted sheep figurines from Pilismarót-Basaharc, Salgótarján-Pécskő and Veľká Lomnica/Kakaslomnic[543] as well as what she interpreted as a pig figurine from Grave 364[544] and as a dog figurine from Grave 359 of the Pilismarót cemetery.[545]

Highly stylised animal figurines closely resembling the ones from Ózd have been recently published from Stránska-Mogyoróska by Gabriel Nevizánsky,[546] who briefly reviewed the Late Copper Age animal depictions known from Slovakia. He listed zoomorphic finds from eleven sites,[547] which he assigned to the category of ritual artefacts together with human figurines, breast pots, urns modelled on the human body, masks and wagon models.[548]

Klára Kővári too discussed the currently known animal figurines, citing free-standing examples from Moravia (Hlinsko, Olomouc), Austria (Mödling and Zerndorf)[549] and Slovakia (Veľká Lomnic/Kakaslomnic),[550] the latter since published also in the site report of the hilltop settlement.[551] She also mentions a small animal head from Balatonlelle-Országúti-dűlő that has not been published yet.[552]

Nine animal figurines were found at Lieskovec-Hrádok in Slovakia.[553] The figurines were made using the coil technique; all are highly stylised portrayals, making a species determination near impossible. While the nine figurines can be securely dated because they come from the settlement's Late Copper Age occupation level, they were all unstratified finds without a known archaeological context.[554]

The corpus of zoomorphic finds is enriched by the additional free-standing figurines mentioned in the chapter covering animal depictions in Martin Furholt's monograph: he cites examples from Zelená Horá, Obrova, Laškov, Ohrozim, Bílovice, Vážany, Zvířátko, Jevišovice C1, Brno-Líšen, Smižany and Chloumek. Furholt assigned the figurines to two main categories: pieces without a realistically modelled head and ones with a head.[555]

Another type of animal depiction can be associated with wagon models, usually taking the form of animal figures applied to the wagon box,[556] or of free-standing animals yoked to the wagon, from which it is obvious that the animals had been used for traction.[557]

Another category is represented by animal depictions attached to vessels. The Radošina site yielded an animal head fragment described as coming from a "zoomorphic vessel".[558] The animal head, believed

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[542] Horváth 2006a; Horváth 2010b; Horváth 2013.

[543] Horváth 2006a, 126.

[544] Horváth 2006a, 128. It must here be noted that according to István Torma, the figurine from Grave 364 depicted sheep. Its identification as a pig figurine is probably Tünde Horváth's personal opinion, unconfirmed by an archaeozoologist.

[545] Horváth 2006a, 129.

[546] Nevizánsky 2009, Tab. 1. 1–5.

[547] Nevizánsky 2009, Abb. 1.

[548] Nevizánsky 2009, 33.

[549] Kővári 2010, 393, with the earlier literature.

[550] Kővári 2010, 394.

[551] Novotná–Soják 2013, 129–141, Abb. 100–105.

[552] Kővári 2010, 394.

[553] Malček 2010, Tab. 1–2; Malček 2013, Obr. 52–53.

[554] Malček 2013, 126.

[555] Furholt 2009, 124–127, Abb. 81–82.

[556] Radošina, Boglárlelle, Moha, Kaposvár (Bondár 2012a, 46), of which the animal pair, portraying a species without horns, perhaps resembling sheep, has only survived on the Radošina protome. In the publication, the animals are identified as dogs, rams or bears (Němejcová-Pavúková–Bárta 1977, 443).

[557] Bondár 2012a, 48–55.

[558] Němejcová-Pavúková–Bárta 1977, 442, Abb. 6.

to have broken off a vessel that cannot be reconstructed, bears little resemblance to the wagon model protomes. Two animal head fragments were brought to light at Jevišovice C, which had similarly been attached to vessels.[559]

An animal head fragment resembling the ones on the Boglárlelle wagon model has been published from Balatonőszöd. In Horváth's interpretation, the animal head was a protome, either from a miniature wagon or from an amphora adorned with animal heads.[560] However, genuine animal head protomes have only survived on the Radošina wagon, but these have little in common with the piece from Balatonőszöd, and it therefore remains uncertain whether the Balatonőszöd fragment had once adorned a clay wagon or an amphora – the latter seems more likely to me because both protomes and animal heads applied to vessels have been found at Radošina.

In her study on animal depictions, Klára Kővári reviewed the animal heads that broke off Late Copper Age vessels. She quotes three pieces from Moravia, two animal heads perhaps depicting sheep from Jevišovice and Opava, and a goat head from Vysočany.[561] She mentions a stylised animal head on a vessel rim discovered at Abony,[562] This depiction, a highly abstracted, triangular animal head, is a new element in zoomorphic elements applied to vessels, which, judging from the archaeological record, appears on sites lying far from one another. The animal head on the Abony vessel was created by pinching the vessel rim into a triangular shape in one spot and adding two lines denoting the eyes. An amphora fragment with a triangular animal head applied to the belly is known from Balatonőszöd.[563] A comparable vessel fragment adorned with a triangular animal head has come to light in France at the Chalain 3 site, assigned to the Horgen culture and dated around 3200 BC,[564] which has been interpreted as a ritualised portrayal of how animal power was harnessed for traction, as embodied by the stylised animal depictions from the westerly regions of Switzerland and the Jura Mountains, which remained current for roughly a century.[565]

One of the perhaps loveliest examples of animal figures applied to vessels is the bowl decorated with an elegant design in its interior and six evenly spaced animal figures set on the rim from Žlkovce (Zsalkóc, Zsúk).[566] A close-up photo of one figure appears in the publication.[567] The small animal figure is rather clumsily modelled, appearing to be almost lifeless. Its head is disproportionately large, its long legs dangle down the side of the bowl, and its eyes appear to be closed. Its species can barely be determined. Viera Němejcová-Pavúková regarded the figures as horse depictions. Although remains of this species are rarely found in Baden contexts. horse bones were recovered during the excavation of the Baden settlement at Komjatice and from Features 55a and 55b/80 at Žlkovce, which makes this interpretation plausible.[568]

Vessels modelled in the shape of animals represent yet another category in the archaeological corpus of zoomorphic finds. Several examples are known from earlier periods, with most coming from various sites in the extensive Lengyel distribution. The many different bird-shaped askoi and rattles of the Bronze Age can similarly be assigned here.

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[559] Medunová-Benešová 1984, Taf. 137. 1, Taf. 139. 1.
[560] Horváth 2010a, 19, Abb. 7. 1.
[561] Kővári 2010, 394, Fig. 10.
[562] Kővári 2010, 394. Originally published in the site's excavation report: Fábián et al. 2008, Fig. 3.
[563] Horváth 2010, Fig. 4. 4.
[564] Pétrequin et al. 2006, Fig. 17.
[565] Pétrequin et al. 2006, 103.
[566] Němejcová-Pavúková 1984, Obr. 16. 3, Obr. 25. 1–2.
[567] Němejcová-Pavúková 1984, Obr. 25. 3.
[568] Němejcová-Pavúková 1984, 145.

A single zoomorphic vessel is known from the Late Copper Age: an exceptionally beautiful amphora adorned with a cow head,[569] which according to Klára Kővári can be associated with the cult of the Mother Goddess.[570] The realistically modelled head has finely rendered eyes, muzzle, mouth and inward curving horns. A finger-impressed triple cordon encircles the neck. Both sides of the upper third of the vessel body are decorated with incised zig-zag lines terminating under the neck and at the rear, which are plain. The potter applied a tiny tail to the rear end. The vessel's opening with a short rim is set in the middle of the back.

The above brief overview of Late Copper Age animal depictions indicates that the clay figurines whose head has survived are generally interpreted as portraying sheep,[571] goat,[572] dog[573] or pig.[574] The corpus of animal figurines includes also sheep with twisted horns.[575] The figure of a bear was one suggestion for the animal species represented by the Radošina protome, while the figure of horses seems likely on the Żlkovce bowl.

Given the prominence of the cattle cult in the Baden complex and its wide range of manifestations (interment of humans and animals in the same grave, interment of animals in cemeteries, dumping of slaughtered animals in pits and wells, interment of animals in anatomical order in pits), one might expect that cattle would also be translated into clay. Curiously enough, no cattle figurines have yet been found – this species is represented by a single zoomorphic vessel from Vác.[576] Clay drinking horns are the single other finds that can be linked to cattle, at present only known from the Pilismarót cemetery.

The free-standing animal figurines from Pilismarót represent a new genre in the Copper Age zoomorphic depictions: stocky, large-sized statuettes that more or less resemble their genuine live counterparts.

The figurines from the cemetery were first described in István Torma's preliminary report[577] and in the catalogues accompanying the exhibition of Neolithic and Copper Age art from Hungary shown in Vienna and Munich.[578] He tentatively identified the fragmentary figurine from Grave 359 *(Pl. 12. 2)*, whose two forelegs, shoulder, the left hind leg and the left ear are missing, as a calf. The figurine from Grave 413 *(Pl. 54. 1)*, found broken in two *(Pl. 34. 1)* and lacking all four of its legs. was interpreted as the depiction of a lamb, with the rough surface of its back perhaps an indication of the young animal's wool. The figurine from Grave 414 *(Pl. 34. 3*) was similarly broken in several pieces and lacked a part of the body and its tail *(Pl. 54. 2)*. Torma pointed out the remarkable resemblance between the two latter pieces and suggested that both had perhaps been made by the same hand. The long legs were possibly an indication of a young animal. A fragment of the shoulder and of one of the hind legs of an animal figurine were placed in Grave 418 *(Pl. 36. 6*). The position of the hind leg suggested to Torma that the figurine portrayed the animal resting on its hind legs in a half-lying posture.[579] Several fragments of an

[569] Kővári 2010, Figs 3–7

[570] Kővári 2010, 397. In my view, the vessel was perhaps used during initiation rites and rituals celebrating rebirth, a ceremony of the type still practiced in India in the 19th century. The initiate was led into a cow shaped golden receptacle and after re-emerging from the receptacle, the initiate was regarded as having been reborn. The cow was one epiphany of the Great Goddess, with the cow symbolizing the womb-shaped receptacle, an expression of mythical rebirth (Eliade 1999, 111–112).

[571] Salgótarján, Pilismarót, Veľká Lomnicá, Jevišovice, Pilismarót.

[572] Vysočany.

[573] Ózd, Salgótarján, Pilismarót.

[574] Kánya, Pilismarót.

[575] Chloumek.

[576] Kővári 2010, Figs 3–7.

[577] Torma 1972.

[578] Torma 1972; Torma 1973a.

[579] The reconstruction drawing was made by Magdolna Éber.

animal figurine were found in the area between Graves 416 and 418 *(Pl. 51. 13)*, which lacked half of its right hind leg and the tip of its tail *(Pl 54. 3–4)*, while its right ear was damaged during the excavation. This is the best-preserved figurine, which also portrays a young lamb. One important observation made by Torma was that all the body fragments have a hollow with a diameter of 0.5–07 mm – which could no longer be seen on the refitted and restored figurines – the imprint of a rod. The impression of the rod survived by the right eye of the figurine from Grave 414 and on the neck of the figurine found in the area between Graves 416 and 418. It seems likely that the rod had served as the core around which the figurines had been modelled.[580]

According to the field diaries, the animal figurines from the graves had all lain broken by the outer edge of the stone packing covering the burial (Grave 359: western edge, Grave 413: eastern edge, Grave 414: western edge, Grave 451: south-western edge), the single exception being the figurine from Grave 418, which "lay among the upper stone in the middle of the stone packing". This would suggest that the already broken and fragmented animal figurines had been deposited by the grave *after* the interment of the cremains and the construction of the stone packing. In Torma's view, the animal figurines were substitutes for the animals sacrificed in honour of the deceased.[581]

The animal figurines from Pilismarót *(Pl. 55, Fig. 15)* are unusually large and stocky statuettes. Their length ranges between 11.7 cm *(Pl. 49. 1)* and 22.5 cm *(Pl. 34. 3*), their height between 4.6 cm *(Pl. 34. 1)* and 10.6 cm *(Pl. 51. 13*), while their body thickness between 3 cm *(Pl. 34. 3*) and 4.6 cm *(Pl. 12. 2)*.

The clay animal figurines were not creatures yoked to wagon models, nor had they been applied to wagon models. Neither were they hastily modelled from clay coils. They are carefully sculpted, scaled-down version of genuine animals. Some are realistically rendered, while others are more abstracted, whose species eludes us. The sheep figurines from Graves 413 and 414 portray small-bodied young lambs with pointed ears *(Pl. 61. 2)*. The figurine found in the area between Graves 416 and 418 *(Pl. 51. 13)* was modelled on fat-tailed sheep, a species bred principally for its thick wool *(Pl. 61. 1, 3)*. While the other figurines from Pilismarót apparently portray existing creatures, perhaps sheep, goat or dog, none actually reproduce the typical traits of the depicted species. It is quite evident that the well recognisable lamb figurines and the other statuettes were made by different hands, except for the pieces recovered from Graves 413 and 414, which, as Torma had already pointed out, were modelled by the same hand. Unfortunately, the animal heads have not been preserved intact – all are fragmentary – and therefore their present form was essentially determined by the conservators' fantasy. If the restored figurines are regarded as accurate, we may contend that with the exception of the unstratified piece, the makers of the other figurines either had no affinity for, or were unskilled in, working with clay, or that they were not familiar with the creatures they tried to reproduce and depict. We could hypothesise that the purpose in creating the figurines was not a realistic portrayal, but the creation of a schematised quadruped that could be deposited in the burial or on the grave instead of a live creature, the implication being that the animals portrayed by the figurines were valued by the community, which was reluctant to slaughter them. It seems likely that there were few of these creatures around at the time and that the real animals were not a usual daily sight. It is also possible that the potter sculpting the figurines had reproduced the clay likeness of the creatures from memory. Although we know of a multitude of imaginary creatures from later mythologies (such as dragons, griffins, sphinxes and the like), it seems to me that the Pilismarót figurines were not the products of a fertile imagination exactly because of their modelling and their portrayal of recognisable species.

The distribution of burials yielding zoomorphic finds *(Fig. 31)* reveals that one burial (Grave 359) lay in the cemetery's western part and five burials in its eastern half (Graves 364, 418, 413, 414, 451).

[580] Torma 1972, 24.
[581] Torma 1972, 26.

Including also the unstratified figurine from the area between Graves 416 and 418 indicates a clear concentration of these burials in the cemetery's eastern half. Adding the burials containing animal bones (*Fig. 32)*, the picture becomes more nuanced: burials with animal bones too were more frequent in the cemetery's eastern part (Graves 409, 403, 404, 418, 416, 434, 439), although a cluster can also be noted in the middle part (Graves 363, 422, 387, 399) and in the western part (Graves 359, 382, 429). Graves 359 and 418 contained animal bones in addition to the animal figurines: a pig bone was recovered from Grave 359 and a cattle bone from Grave 418.

In her assessment of the animal bones, Erika Gál identified two horse bones from Grave 434 (see pp. 367–379). The few animal bones found in the graves came from pig, cattle, dog, sheep/goat, horse, wild boar and red deer, and mussels and shells were also found in some burials.[582]

### 6. 11. Wagon model

The rectangular clay object from Grave 445 *(Pl. 47. 9, Pl. 56, Fig. 16)* is consistent with the series of Boleráz wagon models such as the ones found at Boglárlelle,[583] Mödling,[584] Plessing,[585] Pezinok[586] and Chrovátsky grob,[587] even though it lacks the prominent axle so typical for the other wagon models of the Late Copper Age such as the ones from Balatonberény[588] and Moha.[589] I have discussed clay vehicle models in detail elsewhere, and thus the interested reader is referred to these studies.[590]

## Lithics

The cemetery's 110 graves yielded four stone axes and seven chipped stone implements, which were analysed in detail by Katalin T. Biró (see pp. 355–366). Here, I shall merely cover their archaeological context.

### 6. 12. Stone axes

Three burials yielded intact or broken stone axes (Graves 336, 340, 387; *Pl. 1. 4, 7, Pl. 4. 2, Pl. 20. 4*), with one burial (Grave 336) containing two axes. The axes are of the shaft-hole, shoe-last-shaped type with a length ranging between 7.5 and 9 cm.

In contrast to the Neolithic, when the deposition of stone axes in burials was a much more frequent practice and had a greater significance, stone axes are not typically part of Late Copper Age grave inventories. However, the reverence of their assumed magical and apotropaic powers survived into later periods and axes were placed in the graves of some Baden burial grounds too.

In her assessment of the Balatonlelle-Felső-Gamász cemetery, Borbála Nagy briefly discussed the stone axes found among the grave goods,[591] noting that shaft-hole axes were deposited in both cremation

[582] I am grateful to Pál Sümegi for the species determination.
[583] Bondár 2012a, Fig. 8.2.
[584] Bondár 2012, Fig. 10. 1.
[585] Bondár 2012a, Fig. 10. 2.
[586] Bondár 2012a, Fig. 16. 2–3.
[587] Bondár 2012a, Fig. 16. 1.
[588] Bondár 2012a, Fig. 11.
[589] Bondár 2012a, Fig. 12.
[590] Bondár 1990, Abb. 7. 3; Bondár 1992, 115, Fig. 7. 3; Bondár 2004, Fig, 2. 3; Bondár 2006, 229. Fig. 5. 3, Bondár 2012a, Fig. 8. 3.
[591] Nagy 2010, 409.

burials (Fonyód, Grave 3, Viss, Sajógömör, Grave 9) and inhumation graves (Budakalász, Grave 164, Franzhausen I, Grave 206, Nitriansky Hrádok, mass grave, Lichtenwörth, mass grave, Wolfersdorf). Her list can be enlarged with the following sites where stone axes or their fragments were recovered from burials: Petőháza,[592] Köveskál,[593] Szob-Verbicek[594] and Viss.[595] Although she only quotes Grave 164 of the Budakalász cemetery, stone axes had been placed in several other burials too (Graves 91, 194, 227 and 294, i.e. five burials yielded seven stone axes, with Graves 91 and 164 containing two each).[596]

### 6. 13. Chipped stone implements

Seven burials yielded nine chipped stone implements (Grave 346: *Pl. 6. 2*, Grave 386: *Pl. 19. 13*, Grave 429: *Pl. 41. 7*, Grave 444: *Pl. 46. 5*, Grave 451: *Pl. 48. 19*, Grave 453: *Pl. 50. 10*, Grave 454: *Pl. 50. 14*), of which Graves 453 and 454 contained two pieces.

Chipped stone implements have been recovered from most of the known Late Copper Age cemeteries. Ten of the twenty-three burials uncovered at Balatonlelle-Felső-Gamász contained chipped stone implements or cores, whose number totalled forty,[597] while fifty-nine of the 436 graves in the Budakalász cemetery yielded a total of 154 implements. A single piece was deposited in fifty-six graves, ten pieces in two graves and seventy-eight were placed in one burial (Grave 91).[598] Seven of the forty graves excavated at Alsónémedi contained a total of eight chipped stone implements.[599]

The distribution of burials with lithics *(Fig. 33)* indicates that of the three burials containing stone axes, two burials (Graves 336, 340) lay in the cemetery's western part and one in its middle part (Grave 387). A roughly similar pattern can be noted in the case of the burials with chipped stone implements: two burials lay in the western part (Graves 346, 429), one in the middle (Grave 386), with a third cluster of burials lying near one another in the south-western part (Graves 451, 453, 454, 444). A similar concentration can be seen in the distribution of animal figurines and rhytons *(Fig. 31)*. Little is known about the deceased: Grave 451 was the burial of an adult (perhaps a male) who was accorded an animal figurine, a chipped stone implement and a broken clay cone in addition to various vessels. Graves 453 and 454 contained the cremains of adults; the special status of the deceased interred in Grave 454 was reflected also by the miniature suspension vessel in the grave inventory.

## 7. The internal chronology of the cemetery

Traditional cemetery publications usually have the following format: a description of the graves, a description of the grave inventories, a theoretical reconstruction of cultural and trade contacts with other regions based on artefacts regarded as "imports" and the physical anthropological data of the deceased (age and sex). This traditional procedure has more recently been complemented by radiocarbon dating which, owing to its costliness, is generally restricted to samples from a few graves. The few radiocarbon dates thus gained have become the main anchors for dating a cemetery, with the lowest and highest dates determining the span of its use. This is the reason for the "appearance" of Copper Age cemeteries used for six to eight hundred years, even if this range is often at strong variance with the archaeological

[592] Bella 1892, 347, Fig. 9.
[593] Bondár 1987, Fig. 11.
[594] MRT 9, Site 26/34.
[595] Banner 1956, 106.
[596] Bondár 2009a, 295.
[597] Nagy 2010, 405.
[598] Bondár 2009a, 295.
[599] Korek 1951, 56.

record, which does not confirm the existence of large settlements occupied for several centuries, a demonstrably identical population, unchanging beliefs, etc.[600]

Currently, the very concepts of archaeological typology and archaeological culture have come under a barrage of criticism and are being re-evaluated.[601] Most prehistorians have accepted Martin Furholt's proposal to use the term "complex" or "ceramic style", which, while based on traditional archaeological typology, is bolstered by mathematical methods.[602]

The re-assessment of the Baden culture was begun several years ago. It is often quite difficult to find one's way through the maze of new sub-groups, phases and chronological schemes. I voiced my practical reservations about Viera Němejcová-Pavúková's generally accepted and employed chronological system in the assessment of a larger settlement material.[603] One persistent problem is that the same site is often assigned to a different phase in terms of relative chronology in different schemes[604] and that the sequence of certain phases (such as proto-Boleráz and Boleráz) is not confirmed by absolute dates, which instead tend to indicate their contemporaneity.[605]

Absolute dates raise a different spate of problems. One of these is posed by the synchronisation of dates from different laboratories, another by the comparison and synchronisation of dates gained from different types of samples (human or animal bones) subjected to different calibration procedures (OxCal, CalPal, 1σ: 68% confidence level, or 2σ: 95% confidence level, etc.). The Bayesian modelling of radiocarbon dates has also come under critical fire[606] and thus a familiarity with and understanding of different dating procedures becomes increasingly difficult.

There has been a welcome increase in the large radiocarbon series for the Late Copper Age of various regions.[607] Most prehistorians date the early Baden (Boleráz) period to 3650–3350 cal BC,[608] while the classical period is generally assigned to 3350–3100/2900 cal BC. However, given that chronological sequences differ from one country to the next, this problem too needs to be resolved somehow when defining in the age of a particular site in calendar years. In addition to bridging the chronological fault-line (the roughly millennium-long discrepancy between the short and long chronology), regional chronological sequences also have to be reconciled.[609]

We were lucky in that we could submit samples for radiocarbon dating from the Pilismarót cemetery (see pp. 349–354). It was clear from the very beginning from István Torma's preliminary report and his typological analysis of the finds that the Boleráz cemetery at Pilismarót had an earlier and a later phase. The date of the cemetery's use-life is additionally coloured by the pottery decorated in the *Furchenstich* style, which in Torma's opinion pre-dated the Boleráz period and became secondarily redeposited and mixed with the grave inventories at the time the cemetery was established.[610]

When selecting the graves to be sampled for radiocarbon dating, my main goal was to choose graves from different parts of the cemetery and to pick burials containing a rich array of finds and/or uncommon objects (*Fig. 34*). Although I had to slightly modify my initial candidates in the light of the available

[600] For a critical assessment of earlier chronological schemes, see Raczky–Siklósi 2013.
[601] Furholt 2008a; Raczky 2009; Furholt 2009a; Furholt 2011; Harding 2013; Kristiansen 2014; Porčić–Nešić 2014; Sørensen 2015.
[602] Furholt 2008; Furholt 2008a; Furholt 2009.
[603] Bondár 2010, 324–327.
[604] Bondár 2010, Table 4; Schier 2014a, Figs 1–6.
[605] Wild et al. 2001, 1062; Bondár 2010, 329–330; Bondár 2010a, note 29; Furholt 2013.
[606] Sraka 2012; Sraka 2014; Zastawny 2015, 203–205.
[607] Trifonov 2004, Tab. 1; Baldia et al. 2008, Tab. 1; Siklósi 2009; Furholt 2013; Horváth–Svingor 2015; Peška 2015, Tab. 1; Zastawny 2015; Szmyt 2015, Tab. 1–2
[608] Wild et al. 2001; Furholt 2008; Furholt 2009, 230–241; Bondár 2010, 327–330; Furholt 2013.
[609] Trifonov 2004; Ivanova 2007; Stein 2012; Kavtaradze 2013.
[610] Torma 1973, 503.

calcined bones suitable for dating, but even so, I was able to meet the basic criteria. Thirty-seven burials did not contain any cremains, while twenty-one burials yielded no more than a few calcined bone splinters; more substantial amounts of cremains were recovered from fifty-two burials *(Fig. 18)*, of which twelve were selected for sampling. The AMS measurements were performed by Derek Hamilton in the Scottish Universities Environmental Research Centre in Glasgow. During the assessment of the animal bones, Erika Gál identified two horse bones in Grave 434, from which samples were sent to the Debrecen laboratory for radiocarbon dating.[611] The 1σ calibrated dates from these samples fit in well with the dates received for the human cremains.

There are absolute dates for thirteen graves in the Pilismarót-Basaharc cemetery (twelve on human remains and one on animal bone), which accounts for 11% of all the graves and for one-quarter (25%) of the graves yielding a sufficient amount of cremains.

The radiocarbon measurements gave widely differing dates for Graves 390 and 390/a. While the typology of the two grave inventories suggested that the two burials were roughly contemporaneous, the radiocarbon dates indicated a difference of several hundred years. The measurement was repeated for Grave 390, which gave a date of 3100–2920 cal BC, while the date for Grave 390/a was substantially earlier with its date of 3500–3340 cal BC.

We cannot be certain about the reason for the widely differing dates; one might be that the calcined bone from which the sample was taken was not well cremated and thus gave later dates; another might be the chemical properties of the soil, or the post-excavation storage conditions, which can affect the results of measurements. Whichever the case, I took into consideration the typochronological assessment in the dating of Grave 390. The measurements for Graves 399 and 411 were similarly repeated with fresh samples and were then co-combined; the dates thus gained were consistent with the other dates and could be fitted into the cemetery's overall sequence.

According to current scholarship, pottery in the *Furchenstich* style is earlier than the Boleráz period. The *Furchenstich*-decorated pottery fragments from Graves 365, 390 and 459 as well as the pieces from Trenches d/5–e/5 can be assigned to an earlier period. The *Furchenstich*-decorated fragments came to light in the cemetery's western part. In line with István Torma's opinion, it seems likely that there were a few settlement features and/or graves of the earlier period in this area prior to the opening of the Boleráz burial ground. Given the dispersed layout of *Furchenstich* settlements (pits lying 20–30 m apart), this scatter is hardly surprising. Torma's field observations suggested that the *Furchenstich* finds became secondarily redeposited in the Boleráz burials.[612] There were probably no visible traces of the earlier settlement at the time the cemetery was opened. The grave inventory from Grave 365 includes demonstrably Boleráz pottery in addition to the *Furchenstich* vessels and since the contemporaneity of the two can definitely be excluded, I assigned this grave to the Boleráz burials in the analysis.

The assessment of the radiocarbon dates made on the samples and the typological analysis of the finds was performed simultaneously, parallel to each other. This was an exciting exercise because – subsequently – I had the opportunity to compare Torma's earlier typology and my own typochronological system with the radiocarbon dates.

In my assessment of the relative chronology of the Late Copper Age burials, I assumed that the items in the grave inventories had been deposited simultaneously and were therefore co-eval. The deposition of the grave offerings marked the *terminus post quem*. Obviously, the form of some artefacts such as pots, axes and stone blades remained unchanged for a long time and these cannot be used as chronological anchors. It is also possible that earlier graves had been disturbed when new ones were established, but

[611] The radiocarbon measurements were funded by a grant from the National Scientific Research Fund (OTKA project NF 104792). The AMS analysis was performed Mihály Molnár (Isotop Zrt, Debrecen).

[612] Torma 1973, 503–506.

this was a rare event in the Pilismarót cemetery and observations to this effect are meticulously recorded in the field diaries (e.g. in the case of Graves 365 and 390). It is also feasible that some articles were heirlooms or had been preserved for a long time by the community's members before their deposition in a burial.

I excluded from my analysis the burials lacking any grave goods (Graves 404, 410, 425, 438) as well as the ones that contained atypical vessel fragments (Graves 342, 347/a, 389, 417, 430, 431, 446) and the burial of the obviously earlier *Furchenstich* period (Grave 459). My analysis thus covers the grave inventories of ninety-eight burials.

Although highly popular and very spectacular, computer seriations yield a barely intelligible sequence for the average reader. It is based on probability estimates with all its limitations and consequences. If the starting point, the typological system (which is in itself based on a series of subjective criteria) is adequate, the seriation programme orders the finds into a sequence. There are certain conditions to running seriation programmes: it is expedient to omit atypical artefacts, objects that occur only once and the burials without grave goods. If these limitations are performed automatically, then, in the case of the Pilismarót cemetery, we would have to exclude finds with a dating value such as the bowls of Graves 385 and 397 *(Pl. 19. 3, Pl. 27. 7)*, the lavishly ornamented mug from Grave 412 *(Pl. 31. 2)*, the scooping vessel from Grave 429 *(Pl. 41. 6)* and other such finds. The seriation sequence will not reflect a chronological order, but an ordered combination of finds. In other words, the spectacular diagram will reveal little about which were the earliest and latest burials in the cemetery.

The number of artefacts deposited in the burials varies *(Fig. 17)*. The rationale underlying this practice remains unknown and therefore I saw no good reason for a seriation based on the combinations of finds. I asked my colleague János Jakucs to perform an experimental seriation using WinBASP (Bonn Archaeological Software Package),[613] but the results did not contribute to clarifying the internal chronology of the Pilismarót cemetery and I therefore decided to use a different approach for determining the burial ground's internal chronology.

### 7. 1. Typochronology and radiocarbon dates: the ordering of the graves into chronological horizons

The radiocarbon dates for the Pilismarót cemetery are consistent with the other dates for the early Baden (Boleráz) period, which is generally dated between 3650–3350 cal BC. The calibrated radiocarbon dates outlined three main horizons: the earliest fell between 3645 and 3525 cal BC, the middle one between 3500 and 3360 cal BC, and the latest one between 3330 and 2920 cal BC, indicating a mean interval between 3500 and 3360 cal BC, i.e. a span of roughly 140 years (corresponding to three or four generations) that covers the entire Boleráz period.

It must be again emphasised that the calibrated radiocarbon dates merely mark the beginning and end of a chronological horizon that spans a long period of time, often one of several hundred years. In the case of burials, we would have to pinpoint a specific day, namely the day of the funeral, which is obviously impossible using either archaeological or archaeometric methods. All we can claim with more or less certainty is that the funeral occurred on a day between the two absolute dates.

Given that it is impossible to date the burials more accurately, we cannot exclude the possibility that some funerals perhaps took place before 3500 cal BC and some after 3330 cal BC, although most burials fall within these two dates or near them. The task, then, was to determine the chronological sequence of the burials, the temporal sequence of the graves, and whether there were any spatial patterns in the cemetery reflecting this sequence.

[613] I would here like to thank János Jakucs for his help.

| Graves | cal BC | A1 | A2 | A3 | A5 | P1 | P2 | P3 | P4 | P5 | F6 | SJ2 | M3 | J1 | J2 | J3 | J4 | J5 | J6 | J8 | C2 | C3 | B | SV | DP | SB1 | SB4 | SB5 | SB6 | SB7 | CB1 | CB3 | CB5 | CB6 | CB7 | CB8 | CB9 | CB10 | miniature mug | miniature bowl | miniature amphora | miniature lid | clay cones | rollers | spindle whorls | animal figurines |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **411** | 3645–3525 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **434** | 3630–3530 | | ■ | | | | | ■ | | ■ | | | | | | | | | | ■ | | | | | | | | | | ■ | ■ | | | | | | | | | | | | | | | |
| **409** | 3630–3370 | | | | | | ■ | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **414** | 3630–3360 | | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **418** | 3630–3360 | | ■ | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **385** | 3500–3350 | | | | | | | | | | ■ | | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **443** | 3500–3350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **390/a** | 3500–3340 | | | | | | ■ | | | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | |
| **388** | 3370–3090 | | | | | ■ | | | ■ | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **399** | 3360–3090 | | ■ | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **358** | 3350–3020 | ■ | | | | | ■ | ■ | | | | | ■ | | | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **364** | 3330–2920 | | | | | | ■ | | | | | | | ■ | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | |
| **390** | 3100–2920 | | | | | | | | | | | | | | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | | | | | | |

*Table 9. Radiocarbon-dated vessel types*

The classification of the finds from the Pilismarót cemetery and their typological analysis outlined the typochronology of the vessel types. Bowls, jugs, mugs and the dish-pot were the most "useful" types in the typochronological assessment. As part of the typological assessment of the finds, one of my goals was to outline the main boundaries of the internal chronology of the Boleráz period. I found that some types occur both in earlier and later burials.

In knowledge of the radiocarbon dates, several vessel types and some of the rare and uncommon finds could be assigned to periods fixed by absolute dates *(Table 9)*. The finds from the radiocarbon-dated burials were useful for establishing the date of other types and graves. I examined which other burials yielded vessels resembling the pottery types recovered from the securely dated burials and the find combinations in these graves to identify any new elements occurring in them. I checked whether any of the "new" types occurred in any of the radiocarbon-dated burials and whether my typochronology was consistent with the absolute dates.

Using this procedure, which might be labelled "manual seriation", and by searching the database of the graves according to different criteria, I believe I have established a reliable chronological sequence for the cemetery's burials.

I could rely on a few additional anchors for determining the cemetery's internal chronology. One of these was the contemporaneity of Graves 450, 451 and 457, indicated by vessel fragments from the former two burials that could be refitted with a bowl from Grave 457 *(Pl. 50. 5)*. Another was the striking similarity between the animal figurines from Graves 413 and 414, initially pointed out by István Torma, who suggested that they had been made by the same hand, and therefore these two graves could also be regarded as roughly co-eval. The same holds true for the rollers from Graves 401 and 411. I believe that the rhytons from Graves 359 and 405 are an indication of the contemporaneity of the two burials because the fragment from Grave 405 is virtually identical to the drinking horn from Grave 359 (although it must be borne in mind that this "contemporaneity" can cover a difference of thirty to forty years, and that it merely means that the two objects had probably been made by the same potter in a style unique to him/her).

In his report on the finds from Pári, Torma demonstrated that certain vessels from the Pilismarót cemetery indicated a late date at the close of the Boleráz period for the burials they were recovered from. Torma dated Graves 385 and 397 to the late burials on the strength of their bowls *(Pl. 19. 3, Pl. 27. 7)*.[614] The bowls in question (Type CB9) have a rim interior decorated with channelling, a row of punctates encircling the shoulder and an incised herringbone or zig-zag pattern underneath. The base interior is divided into four fields filled with channelling. Some bowls have a string-hole lug or small knobs on the shoulder. Aside from the above two burials, bowls of this type were recovered from Graves 422, 424, 435, 447 and 450.

Torma dated Grave 390 to the end of the Boleráz period in view of its amphora *(Pl. 22. 3)*.[615] This type (A3) was also attested in Grave 457, which, as indicated above, was probably co-eval with Graves 450 and 451.

Jugs of Type J1 were shown by Torma to date to the close of the Boleráz period.[616] The jugs have an outturned rim, an incurving neck and a squat, globular body. Their belly is divided into fields separated by symmetrically set, barely prominent, slender, vertical ribs. The fields between the ribs are filled with oblique channelling in alternating directions combined with three symmetrically set, vertical subcutaneous handles. Jugs of this type were recovered from three burials (Graves 338, 364, 403).

The same decorative principle can be noted on Type J5 jugs and Type M7 mugs decorated with channelled fields separated by lobes pressed out from the vessel interior and vertically perforated

[614] Torma 1977, 47.
[615] Torma 1977, 54.
[616] Torma 1977, 51.

subcutaneous handles (Grave 388: *Pl. 21. 6*, Grave 402: *Pl. 29. 13*, Grave 403: *Pl. 30. 8*, Grave 426: *Pl. 9. 18*, Grave 447: *Pl. 46. 12*, Grave 360: *Pl. 14. 3*, Grave 386: *Pl. 19. 9*, Grave 406: *Pl. 32. 3*). The three vessel types (Type J1 and J5 jugs, Type M7 mugs) can be regarded as being more or less contemporaneous.

In the typological analysis, I assigned the scooping vessel of Grave 429 *(Pl. 41. 6)* to the end of the Boleráz period, to the transition to the classical Baden period. I noted that similarly to the Type J1 jugs found in Grave 364, the dish-pots from Graves 364, 388, 399 and 353 *(Pl. 7. 11, Pl. 16. 12, Pl. 21. 10, Pl. 24. 2)* were ceramics representing a late type. The miniature suspension vessel from Grave 447 *(Pl. 42. 3)* dated this burial to the end of the Boleráz period in view of its resemblance to the amphora from Köveskál, which was found together with a footed goblet that was more current during the classical Baden period.

Thus, by integrating the radiocarbon dates and the typological assessment, I was able to determine the earliest and the latest burials in the cemetery. Next, I examined whether the finds from the remaining burials displayed a closer affinity with the earlier or with the later burials whose finds reflect a transition to the later Baden period. Obviously, some grave inventories contained artefacts that could be assigned to both the early and the late phase. If the typological classification of the ceramic material is well-grounded (despite being based on subjective categorisation criteria), these types indicate one of two possibilities: either the vessel type remained unchanged for a long time, or the vessel type (and the burial) can be assigned to the boundary of the two chronological horizons.

Using this approach, I was able to order the burials into chronological horizons, illustrating which burials could be clearly assigned to the cemetery's early and late phase, and which to the boundary between the two. I tabulated the burials according to their chronology relative to each other *(Table 10)*. The three columns actually mark two chronological horizons owing to the overlaps. I arranged the graves in three columns because it illustrates more clearly how some burials represent a transition from the early to the late phase, marked by the graves on the two sides of the column boundaries. It must be borne in mind that the burials could form one cluster because there is no way of dating the burials more accurately, i.e. of determining the day when the funeral was held.

*Table 10. Chronological horizons in the Pilismarót cemetery*

| Horizon I | Horizon II | Horizon III |
|---|---|---|
| 3645–3525 | 3500–3360 | 3330–2920 |
| 3500 – 3360 – 3330 cal BC | | |
| Graves | Graves | Graves |
| 337 | 336 | |
| 340 | 338 | |
| 341 | 339 | |
| 343 | 346 | 353 |
| 344 | 354 | |
| 347 | *358* | |
| 348 | 359 | |
| 349 | 360 | |
| 350 | 362 | |
| 351 | 382 | *364* |
| 352 | *385* | |
| 355 | 386 | |
| 356 | 387 | *388* |
| 357 | *390/a* | |

| Horizon I | Horizon II | Horizon III |
|---|---|---|
| 3645–3525 | 3500–3360 | 3330–2920 |
| 3500 – 3360 – 3330 cal BC | | |
| Graves | Graves | Graves |
| 361 | *390* | |
| 363 | 391 | 397 |
| 365 | 392 | |
| 383 | 393 | |
| 384 | 395 | |
| 384/a | 396 | |
| 394 | 398 | |
| 400 | 402 | *399* |
| 401 | 403 | |
| 407 | 405 | |
| 408 | 406 | |
| 412 | *409* | |
| *411* | 413 | |
| 419 | *414* | |
| 421 | 415 | |
| 432 | 416 | |
| 437 | *418* | |
| *434* | 420 | |
| 441 | 422 | |
| 442 | 423 | |
| 452 | 424 | |
| 455 | 426 | |
| | 427 | |
| | 428 | |
| | 433 | 429 |
| | 435 | |
| | 436 | |
| | 439 | |
| | 440 | |
| | *443* | |
| | 444 | |
| | 445 | |
| | 447 | |
| | 448 | |
| | 449 | |
| | 450 | |
| | 451 | |
| | 453 | |
| | 454 | |
| | 456 | |
| | 457 | |
| | 458 | |

In the foregoing, I have discussed in detail the typological traits of each vessel type and its best analogies. Here, I shall address the most striking tendencies of each chronological horizon. The abbreviations are identical with the ones used in the typological analysis (for the type charts, see *Figs 9–14*).

The burials of the early horizon (Horizon I) did not contain Type A1, A3, A4 and A5 amphoras, Type P4 pots, Type SJ2 storage jars, Type M2 mugs, Type J1, J5 and J6 jugs, beakers, scooping vessels, suspension vessels, dish-pots, Type SB6, CB4, CB5, CB9 and CB10 bowls, certain types of miniature vessels (mugs, lids), and certain types of prestige items (stamps, spindle whorls, clay spoon, rhytons, animal depictions or wagon model), and they also lacked chipped stone implements.

The vessel types solely occurring in this horizon are as follows: Type A6 amphoras (Grave 351), Type C2 (Graves 365, 441) and C3 cups (Graves 341, 419, 434), Type SJ1 storage jars (Grave 384), Type J7 jugs (Grave 452) and Type CB2 bowls (Graves 347, 394, 407).

Frequent vessel types in Horizon I are represented by Type P1 (Graves 344, 347, 363, 401, 442) and P3 pots (Graves 349, 355, 394, 434, 442), Type J3 jugs (Graves 352, 400, 401, 419, 434), Type SB1 bowls (Graves 352, 355, 356, 384, 400, 401), Type CB1 (Graves 337, 348, 349, 355, 383, 434, 452) and CB 8 bowls (Graves 340,344,350, 351, 355, 356, 432), and Type CB6 bowls (Graves 340, 343, 351, 356, 363, 365, 400, 401, 421).

I assigned three burials containing rollers to this horizon (Graves 401, 411, 434), while the fourth (Grave 439) was assigned to the boundary of Horizon II. Grave 442, yielding a clay cone, was placed on the boundary of Horizon I, while the other burials with clay cones (Graves 416, 443) were assigned to Horizon II and one burial (Grave 451) to Horizon III.

Types current in both Horizon I and II are the following: Type M1 (Graves 339, 408), M3 (Graves 343, 344, 439, 448), M5 (Graves 358, 393, 412, 441), M6 (Graves 336, 407, 408, 426) and M7 mugs (Graves 360, 365, 386, 406), Type C1 cups (Graves 384, 433), Type SB1 (Graves 336, 352, 355, 356, 382, 384, 400, 401, 420) and SB7 bowls (Graves 390/a, 416, 434), Type J4 (Graves 337, 358, 415, 453, 458) and J8 jugs (Graves 422, 434, 452), miniature bowls (Graves 432, 387, 395, 409, 432), miniature beakers (Graves 403, 442), miniature suspension vessels (Graves 434, 447) and stone axes (Graves 336, 340, 387).

Horizon II lacked the following types: Type A3, A5 and A6 amphoras, Type SJ1 and SJ2 storage jars, Type M7 mugs, Type J1, J6, J7 and J8 jugs, Type C2 and C3 cups, scooping vessels, suspension vessels, dish-pots and Type CB2 and CB9 bowls.

Popular types in Horizon II are as follows: Type A2 amphoras (Graves 392, 393, 409, 418, 420, 433, 444, 445, 453, 458), Type J2 jugs (Graves 336, 382, 387, 409, 427, 428, 433, 440, 444, 445, 456), Type CB1 (Graves 336, 387, 391, 392, 420, 423, 433, 448, 449), CB6 (Graves 339, 362, 414, 423, 439, 443, 444, 449, 456), CB10 (Graves 359, 362, 395, 396, 415, 449, 453) and SB6 bowls (Graves 336, 339, 354, 359, 362, 391, 396, 414, 436, 439, 444, 448, 449), and Type P2 pots (Graves 339, 358, 362, 390/a, 395, 396,398, 402, 409, 414, 416, 423, 448, 453, 454).

This period saw an increase in the prestige items, as shown by the stamps, cones, different types of rollers, zoomorphic finds (animal figurines, rhytons, wagon model, spoon with a perhaps bird-headed handle) and lithics deposited in the burials.

The vessel types occurring solely in this horizon are Type M2 mugs (Grave 336), Type CB4 bowls (Grave 336) and miniature mugs (Grave 443, 444).

Types occurring in both Horizon II and III are as follows: Type A1 (Graves 358, 362, 424) and A4 amphoras (Graves 433, 450), Type P4 pots (Graves 388, 358, 402, 423), Type J5 jugs (Graves 338, 402, 403, 426, 447), Type SB6 (Graves 336, 338, 339, 354, 359, 362, 391, 396, 403, 414, 436, 439, 444, 447,

448, 449), CB5 (Graves 390/a and 399) and CB10 bowls (Graves 359, 362, 364, 388, 395, 396, 403, 415, 422, 449, 451, 453), and beakers (Graves 390, 390/a, 454).

The burials dating from the late phase of the cemetery's use-life (Horizon III) lack the following types: Type A6 amphoras, Type SJ1 storage jars, Type M1, M2, M3 and M5 mugs, Type J4 and J7 jugs, Type C1, C2 and C3 cups, Type SB1 and SB7 bowls, miniature mugs and bowls, rollers and stone axes. No more than two burials yielded zoomorphic finds. Only a single example of Type CB5 bowls (Grave 399), miniature beakers (Grave 403) and miniature amphoras (Grave 447) were found in the burials of this horizon. A clay cone was recovered from one burial (Grave 451) and two spindle whorls from another (Grave 364).

The types occurring solely in Horizon III are as follows: Type A3 (Graves 390, 457) and A5 amphoras (Grave 390), Type SJ2 storage jars (Grave 399), Type J1 (Graves 338, 364, 403) and J6 jugs (Grave 385), scooping vessels (Grave 429), suspension amphoras (Grave 390), dish-pots (Graves 353, 364, 388, 399), Type CB9 bowls (Graves 385, 397, 422, 424, 435, 447, 450) and miniature lids (Graves 388, 457).

The types occurring in all three horizons (Type A2 amphoras, Type M4 mugs, Type SB2, SB3, SB4, SB5 bowls, Type P1, P2, P3, P5 and P6 pots, Type J2 and J3 jugs, Type CB1, CB3, CB6, CB7 and CB8 bowls) were recovered from burials that lie on the boundary of a particular chronological horizon and they indicate the fluidity of horizon boundaries and their chronological proximity.

The radiocarbon date of 3100–2920 cal BC for Grave 390 (from the repeated measurement) would suggest that this burial was the latest in the cemetery; however, this date can be rejected on typological grounds. Graves 390/a and 390 were assigned to the same chronological horizon after again reviewing the typology of the finds and the radiocarbon dates

### 7. 2. The "peopling" of the cemetery

Finds of the *Furchenstich* period preceding the Boleráz period came to light in the cemetery's western part.

Rollers were one of the find types occurring in the earliest burials of the Late Copper Age cemetery (Graves 401, 411, 434); these burials all lay in the cemetery's eastern and southern part, which would confirm my assumption, first formulated when examining the spatial patterns in the distribution of certain artefact types, that the location of the burials was pre-allocated. In other words, the deceased were not simply interred beside each other in the order of their death, but in different location according to some pattern.

This pattern is reflected in the distribution of prestige items in the cemetery *(Figs 29–31)*. Eight of the burials containing uncommon artefacts are radiocarbon dated, providing a secure chronological anchor for the other artefacts in their grave inventories. Over 33% of the burials, thirty-seven in all, yielded sixty-six rare and uncommon artefacts *(Table 11)*, reflecting the special status of the individuals interred in these graves.

Two of the burials containing rollers (Graves 411**,** 434) can be assigned to the earliest graves in the cemetery (3645–3530 cal BC). Both lie in the cemetery's eastern part *(Fig. 30. 3*) and their virtual contemporaneity suggests that the two interments were either roughly co-eval or that the location of the graves for the interment of individuals accorded this artefacts was pre-allocated. The typological and chronological differences between burials lying beside one another (Graves 401 and 411, and Graves 434 and 439) rather indicate that while the form of artefacts might have changed, the prestige/status attached to them did not or was inheritable.

There are two radiocarbon dates for the burials containing animal figurines (Graves 414 and 418, both yielding a date of 3630–3360 cal BC). Grave 413 can be regarded as roughly co-eval with Grave

*Table 11. Distribution of uncommon in the graves*

| Grave | Breast pot | Miniature vessels | Suspension vessels | Stamp | Clay cones | Spindle whorls | Rollers | Clay spoonl | Rhyton | Animal figurines | Wagon model | Stone axes | Other lithic finds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 336 | | | | | | | | | | | | ■ | |
| 340 | | | | | | | | | | | | ■ | |
| 346 | | | | | | | | | | | | | ■ |
| 351 | ■ | | | | | | | | ■ | | | | |
| 359 | | | | | | | | | | ■ | | | |
| 361 | | ■ | | | | | | | | | | | |
| 364 | | | | | | ■ | | | | ■ | | | |
| 386 | | | | | | | | | | | | | ■ |
| 387 | | ■ | | | | | | ■ | | | | ■ | |
| 388 | | ■ | | | | | | | | | | | |
| 390 | | | ■ | | | | | | | | | | |
| 391 | | ■ | | | | | | | | | | | |
| 395 | | ■ | | | | | | | | | | | |
| 401 | | | | | | | ■ | | | | | | |
| 403 | | ■ | | | | | | | | | | | |
| 405 | | ■ | | | | | | | ■ | | | | |
| 409 | | ■ | | | | | | | | | | | |
| 411 | | | | | | | ■ | | | | | | |
| 413 | | | | | | | | | | ■ | | | |
| 414 | | | | | | | | | | ■ | | | |
| 416 | | ■ | | | ■ | | | | | | | | |
| 418 | | | | | | | | | | ■ | | | |
| 423 | | ■ | | | | | | | | | | | |
| 427 | | | | ■ | | | | | | | | | |
| 429 | | | | | | | | | | | | | ■ |
| 432 | | ■ | | | | | | | | | | | |
| 434 | | ■ | ■ | | | | ■ | | | | | | |
| 439 | | | | | | | ■ | | | | | | |
| 442 | | ■ | | | ■ | | | | | | | | |
| 443 | | ■ | | | ■ | | | | | | | | |
| 444 | | ■ | | | | | | | | | | | ■ |
| 445 | | | | | | | | | | | ■ | | |
| 447 | | ■ | ■ | | | | | | | | | | |
| 451 | | ■ | | | ■ | | | | | ■ | | | ■ |
| 453 | | | | | | | | | | | | | ■ |
| 454 | | | | | | | | | | | | | ■ |
| 457 | | ■ | | | | | | | | | | | |

424 on typological grounds. Animal figurines were also recovered from two other burials (Graves 359 and 451). Grave 359 was assigned to the same chronological horizon as the above, while Grave 451 perhaps represents the transition to the close of the Boleráz period. The graves with animal figurines in the cemetery's eastern part represent early burials. Grave 359 lay far from these early burials (Graves 413, 414, 418), in the cemetery's western part *(Fig. 31. 1)*, again confirming that individuals who were "honoured" with animal figurines were interred in two different areas of the cemetery, in pre-allocated locations. I have already noted in the above that in literate cultures with written records, the animal figurines used in funerary rites were designed to be substitutes for live animals and thus we may assume that the community's funerary traditions did not call for the slaughter of live animals – a clay figurine was deposited in the grave instead and thus we may regard animal figurines as a reflection of status and/or prestige.

I also assigned the clay cones to the category of prestige items. Clay cones were exclusively found in burials in the cemetery's south-eastern part (Graves 416, 442, 443, 451), of which one is radiocarbon-dated (Grave 443: 3500–3350 cal BC). The date indicates that these burials lie on the boundary of two chronological horizons, on the boundary of the earlier and later Boleráz period.

Miniature mugs were recovered from two burials lying beside one another, from Graves 443, a radiocarbon-dated burial (3500–3350 cal BC) and Grave 444. I assigned both burials to the same chronological horizon.

When examining miniature bowls, my springboard was the piece from Grave 409, which gave a date of 3630–3370 cal BC. The joint presence of Type P2 pots and similar miniature bowls in Graves 395, 409 and 423 indicated that these burials were roughly contemporaneous.

Miniature amphoras were deposited in two burials in the cemetery's eastern part, in Graves 434 (yielding a date of 3630–3530 cal BC) and Grave 457, which, however, can be assigned to the later Boleráz period. It would appear that while the function of the two miniature vessels was identical, their chronological position was not, perhaps a reflection of the longevity of the cognitive content embodied by these small vessels in the funerary rites.

The miniature pots recovered from the burials were all fragmentary and the other items in the grave inventories offered few secure anchors for dating these burials.

Miniature beakers were deposited in two burials (Graves 403 and 442). It has been shown in the above that Grave 442 can be assigned to the cemetery's earlier burials on account of its clay cone. The other finds from Grave 403 suggest that this burial represents a later interment.

Miniature lids were likewise found in two burials (Graves 388 and 457), of which Grave 388 yielded a date of 3370–3090 cal BC. I assigned both burials to the boundary of Horizons II and III.

The spatial distribution of various grave good types in the cemetery shows a rather random pattern, with individual types apparently located in various spots within the cemetery. I found no indication whatsoever that the interments followed one another from east to west or north to south, or the other way round, reflecting a regular spatial pattern in the sequence of interments. I could only determine the location of the earliest burials in different areas of the cemetery's eastern and southern part based on the radiocarbon dates. As we have seen, several co-eval artefact types were recovered from burials lying in different part of the cemetery, suggesting that the main principle in the cemetery's spatial organisation was the pre-allocated location of the graves.

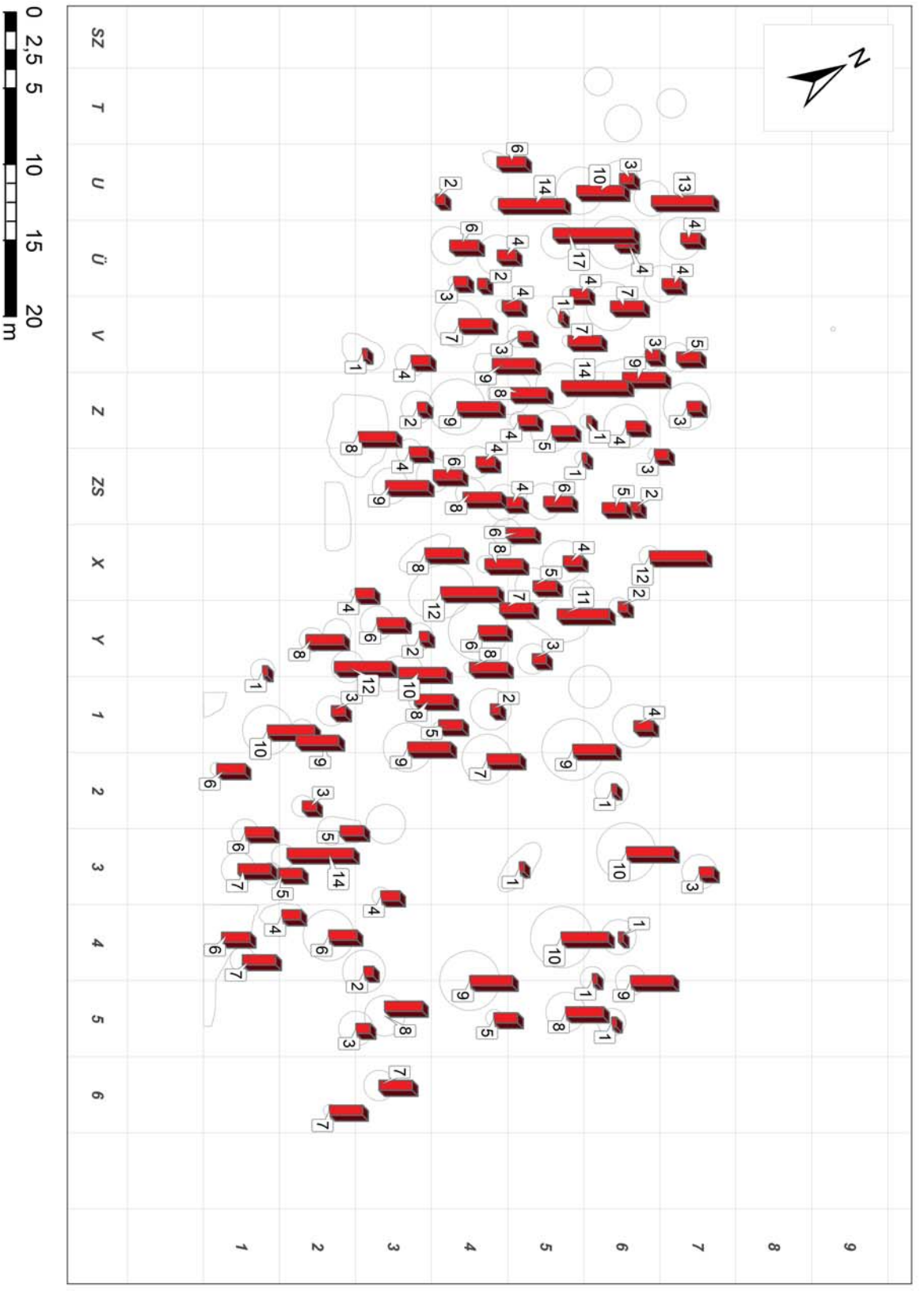


*Figure 17. Pilismarót-Basaharc. Number of finds in individual graves (digital map by Katalin Tolnai)*

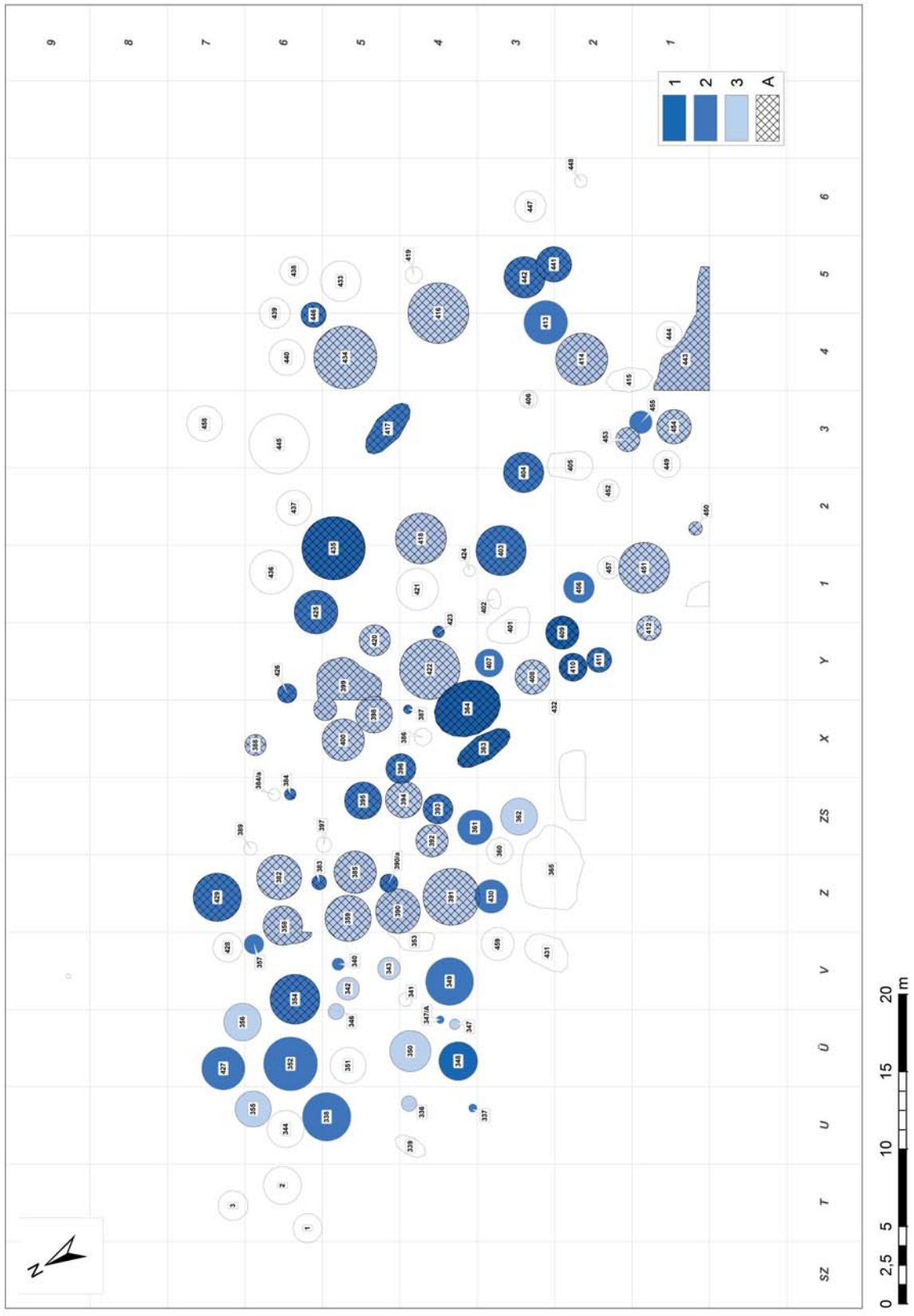


*Figure 18. Pilismarót-Basaharc. Amount of cremains recovered from the graves. 1. Substantial amount of cremains, 2. few calcined bones, 3. cremains can no longer be found, 4. cremains submitted to physical anthropological analyses (digital map by Katalin Tolnai)*

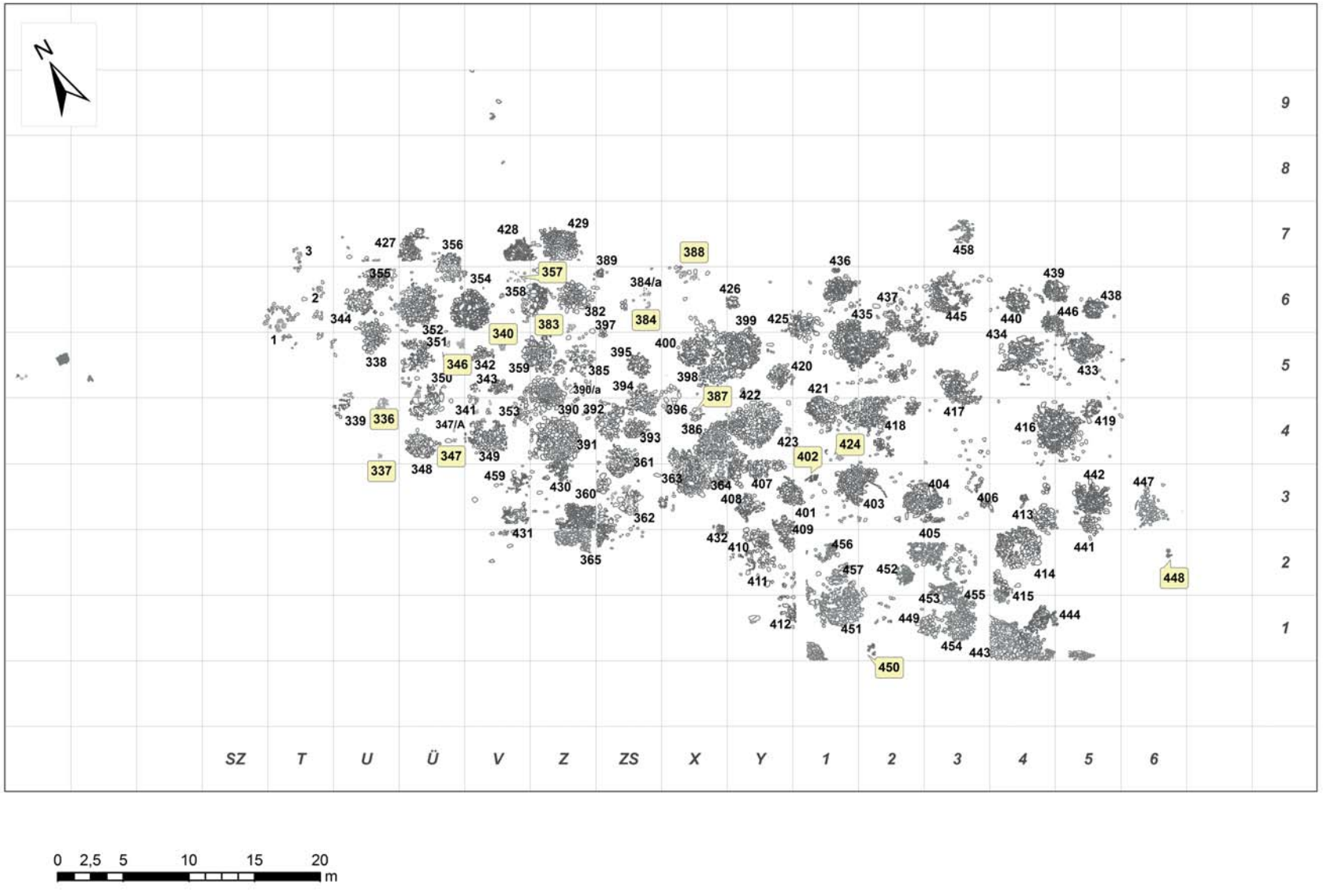


*Figure 19. Pilismarót-Basaharc. Graves lacking a stone packing (drawing by Mária Wolsky, digital map by Katalin Tolnai)*

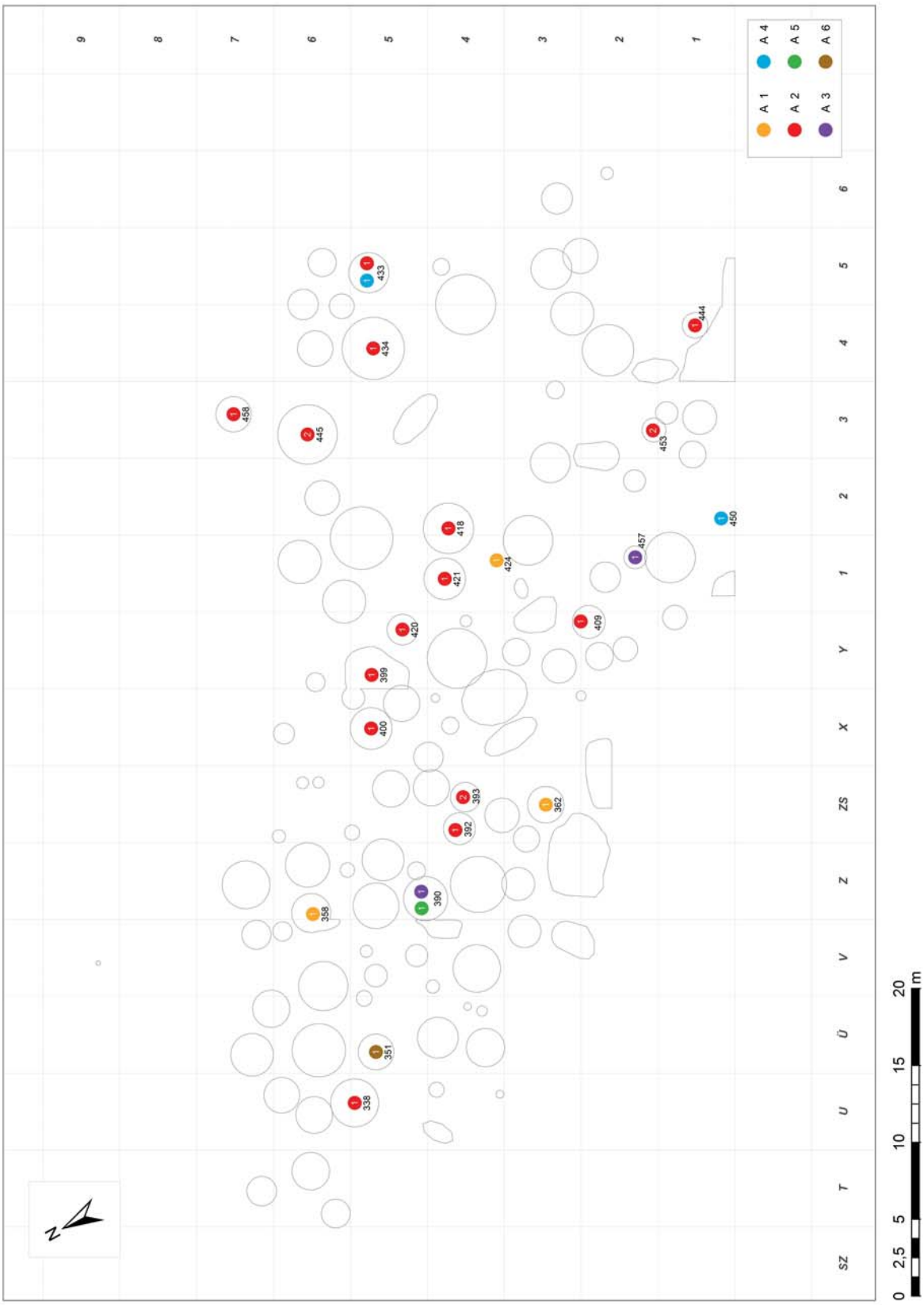


*Figure 20. Pilismarót-Basaharc. Distribution of amphora types in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

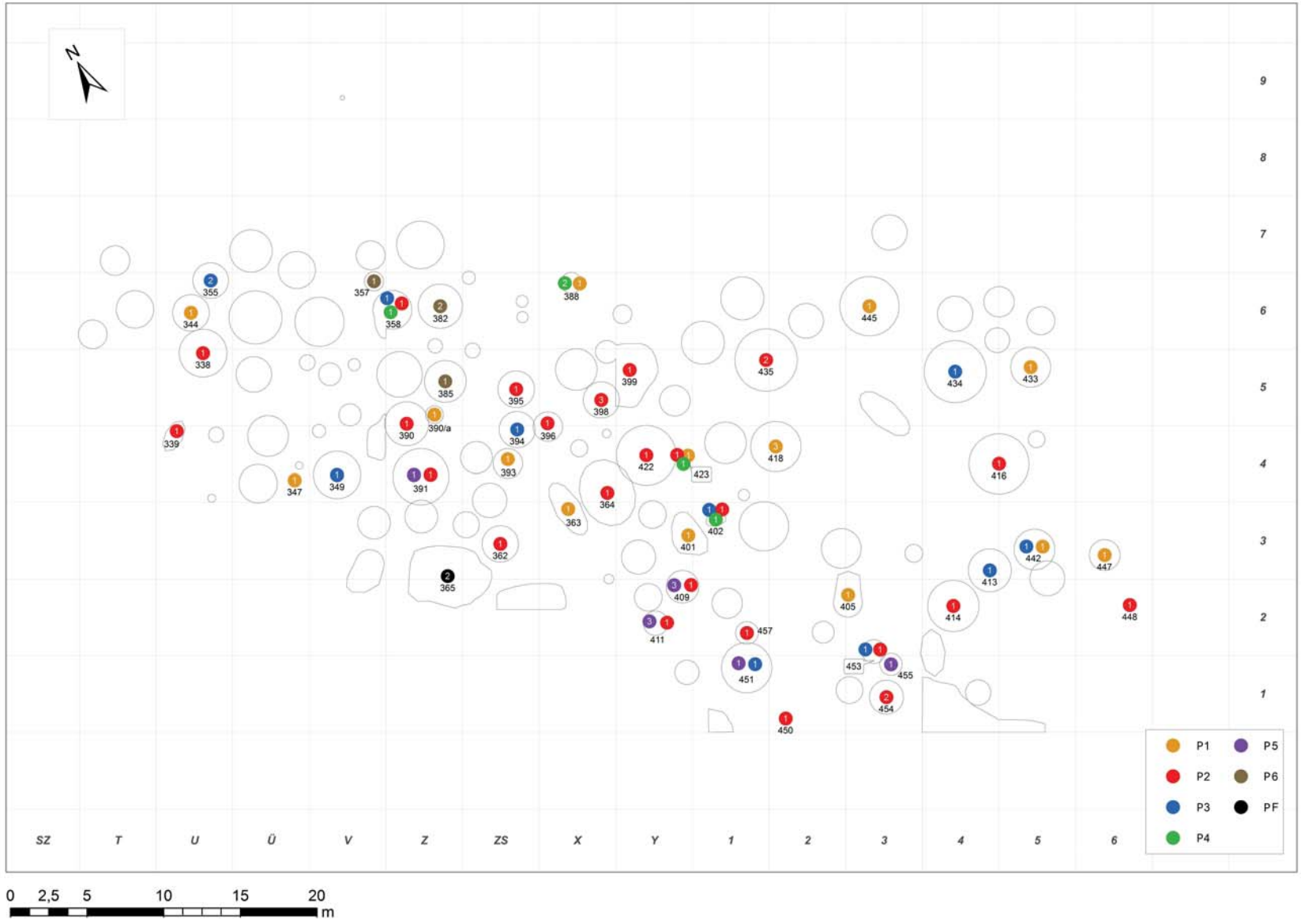


*Figure 21. Pilismarót-Basaharc. Distribution of pot types in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

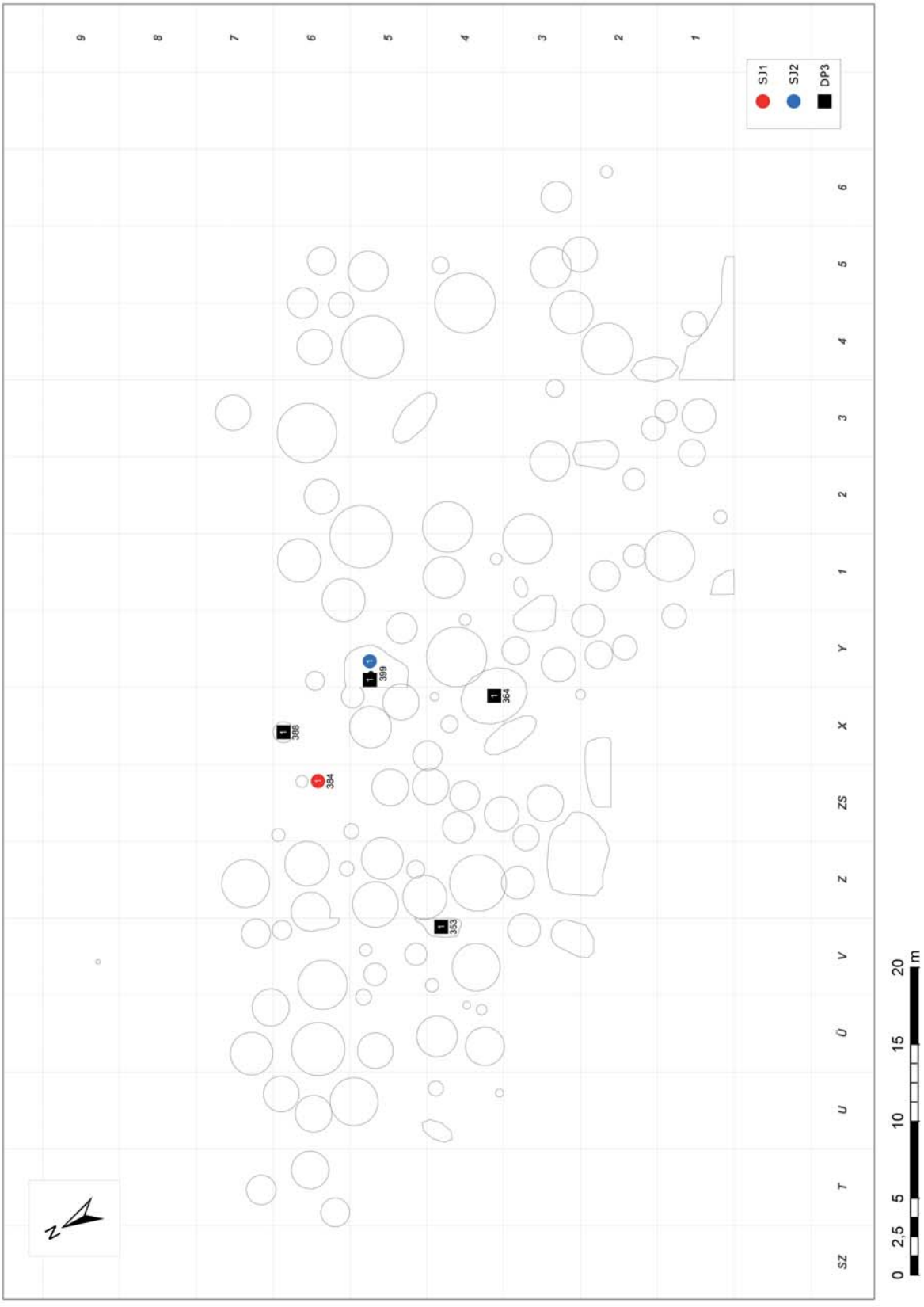


*Figure 22. Pilismarót-Basaharc. Distribution of storage jar and dish-pot types in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

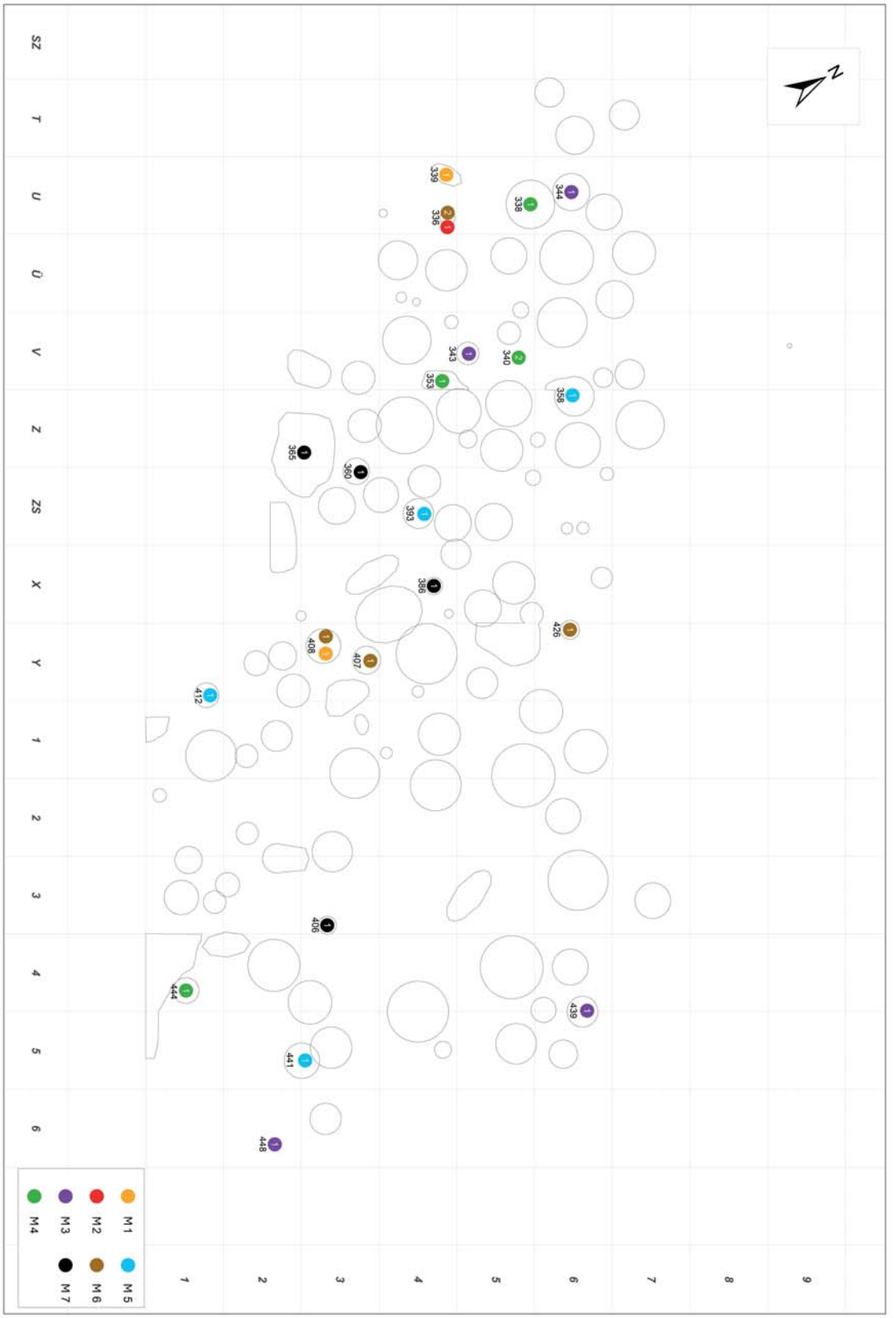


*Figure 23. Pilismarót-Basaharc. Distribution of mug types in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

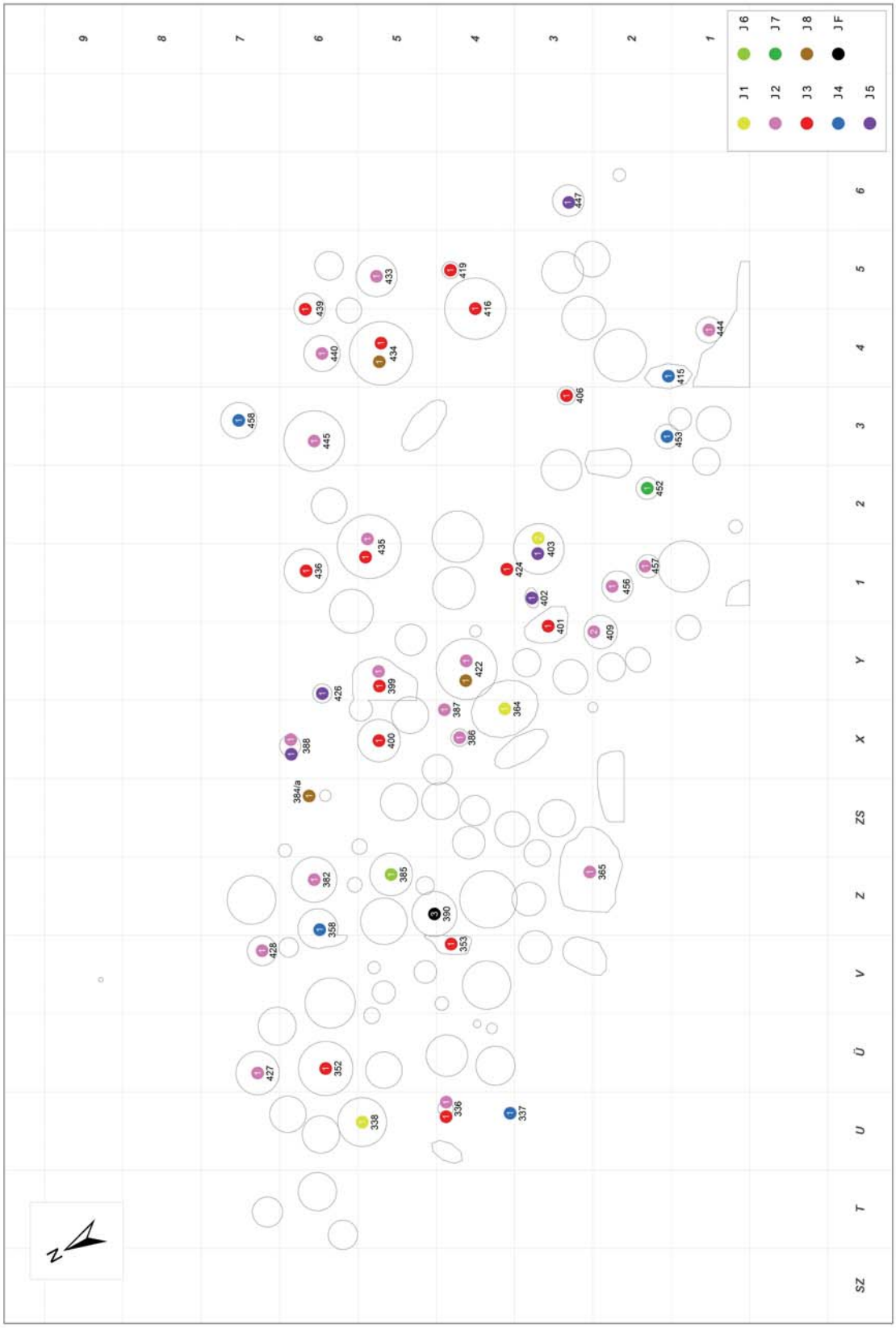


*Figure 24. Pilismarót-Basaharc. Distribution of jug types in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

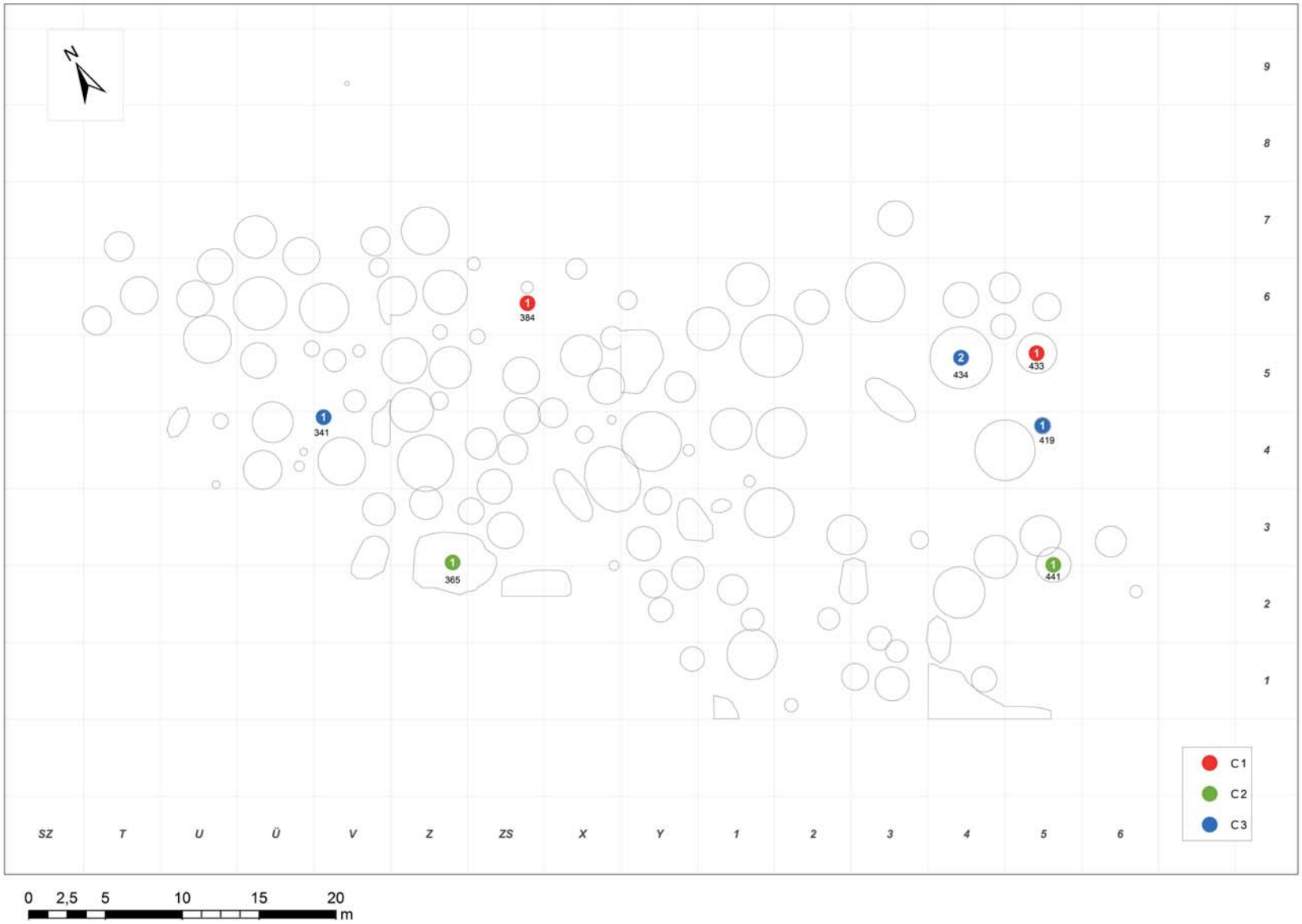


*Figure 25. Pilismarót-Basaharc. Distribution of cup types in the cemetery*
*(digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

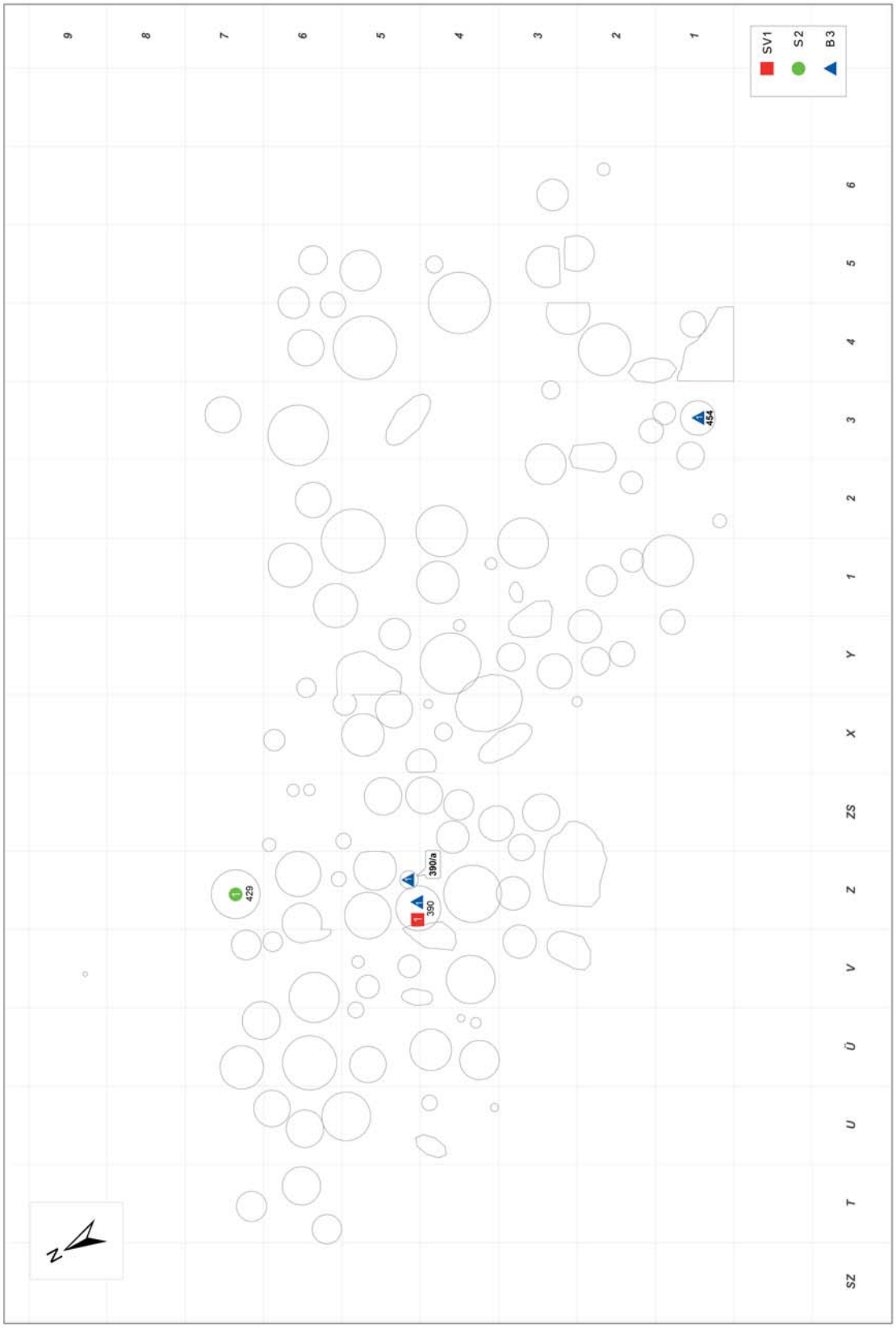


*Figure 26. Pilismarót-Basaharc. Distribution of suspension vessels, scooping vessels and beakers in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

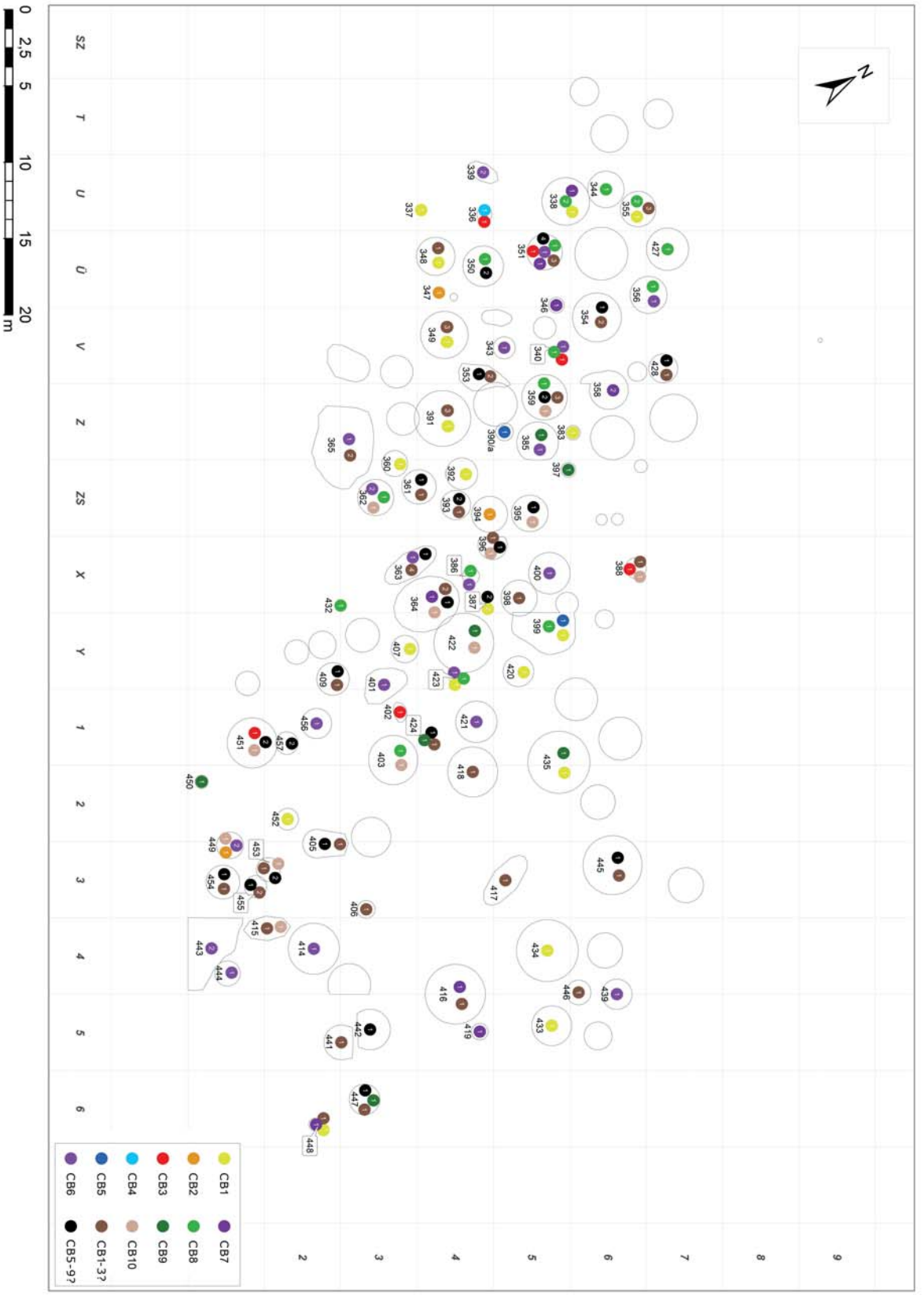


*Figure 27. Pilismarót-Basaharc. Distribution of conical bowl types in the cemetery (digital map by Katalin Tölnai; the numbers mark the number of the vessel type in a grave)*

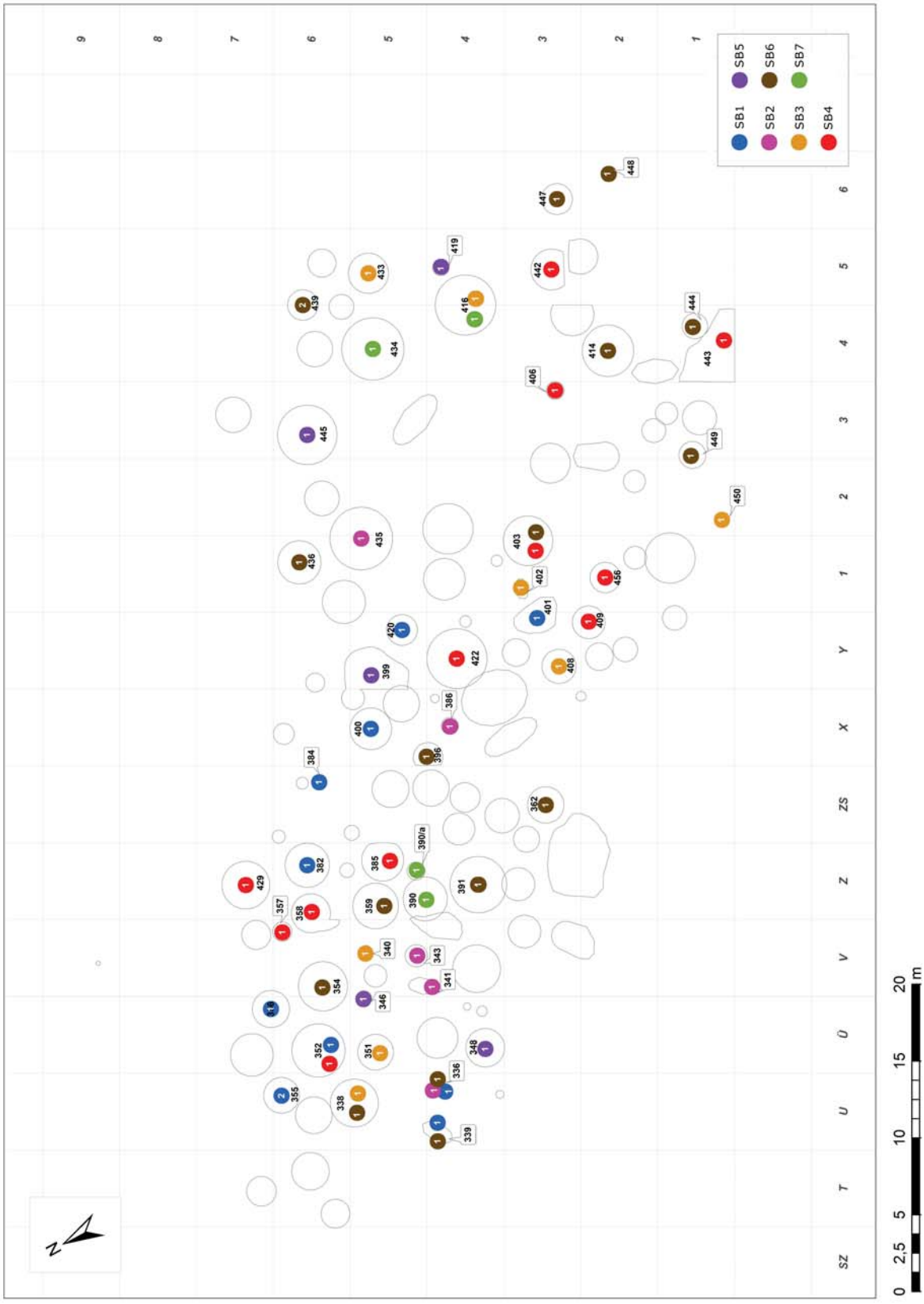


*Figure 28. Pilismarót-Basaharc. Distribution of semi-spherical bowl types in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of the vessel type in a grave)*

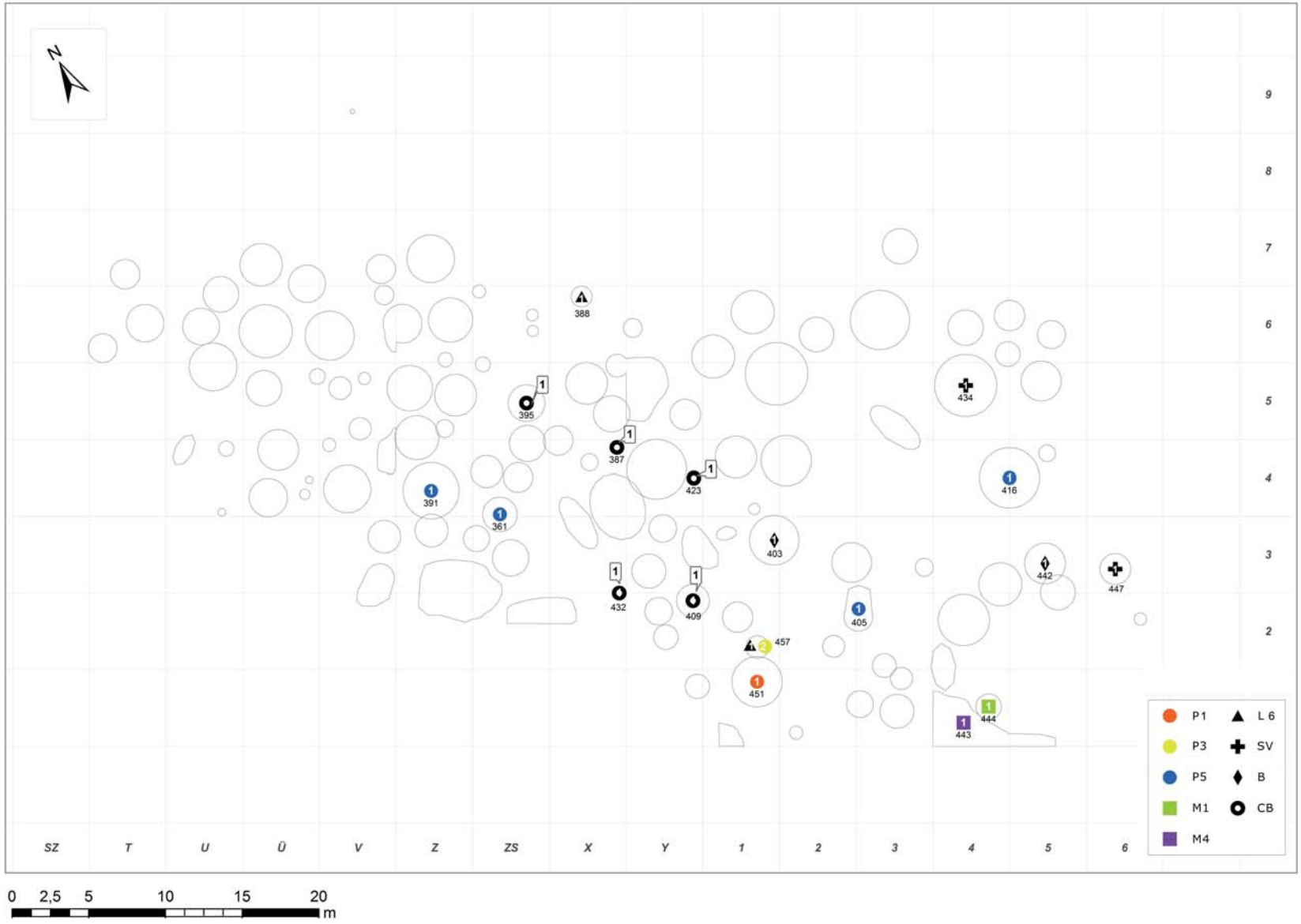


*Figure 29. Pilismarót-Basaharc. Distribution of miniature vessels in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of miniature vessels in a grave)*

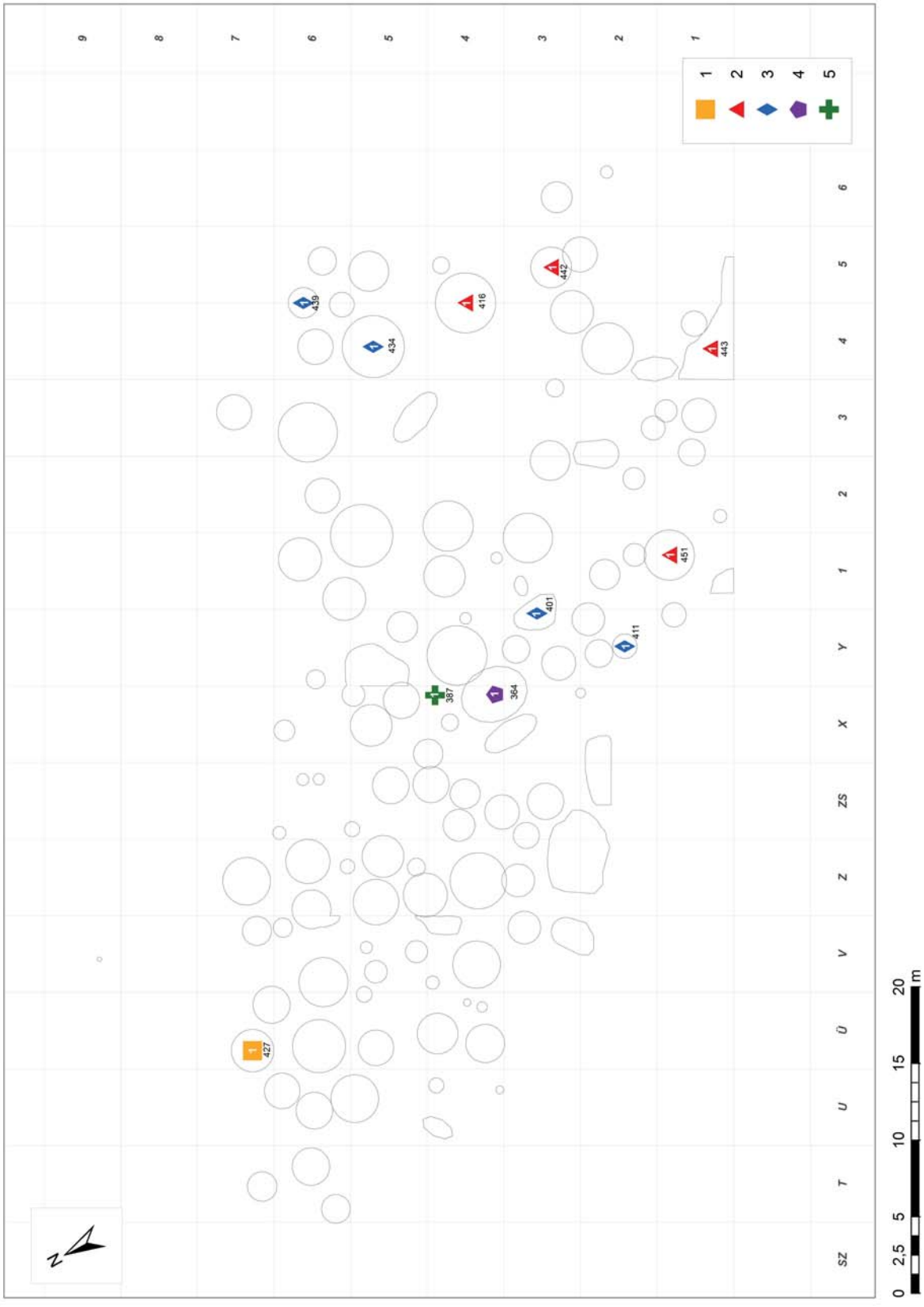


*Figure 30. Pilismarót-Basaharc. Distribution of stamps (1), clay cones (2), rollers (3), spindle whorls (4), and clay spoons (5) in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of each type in a grave)*

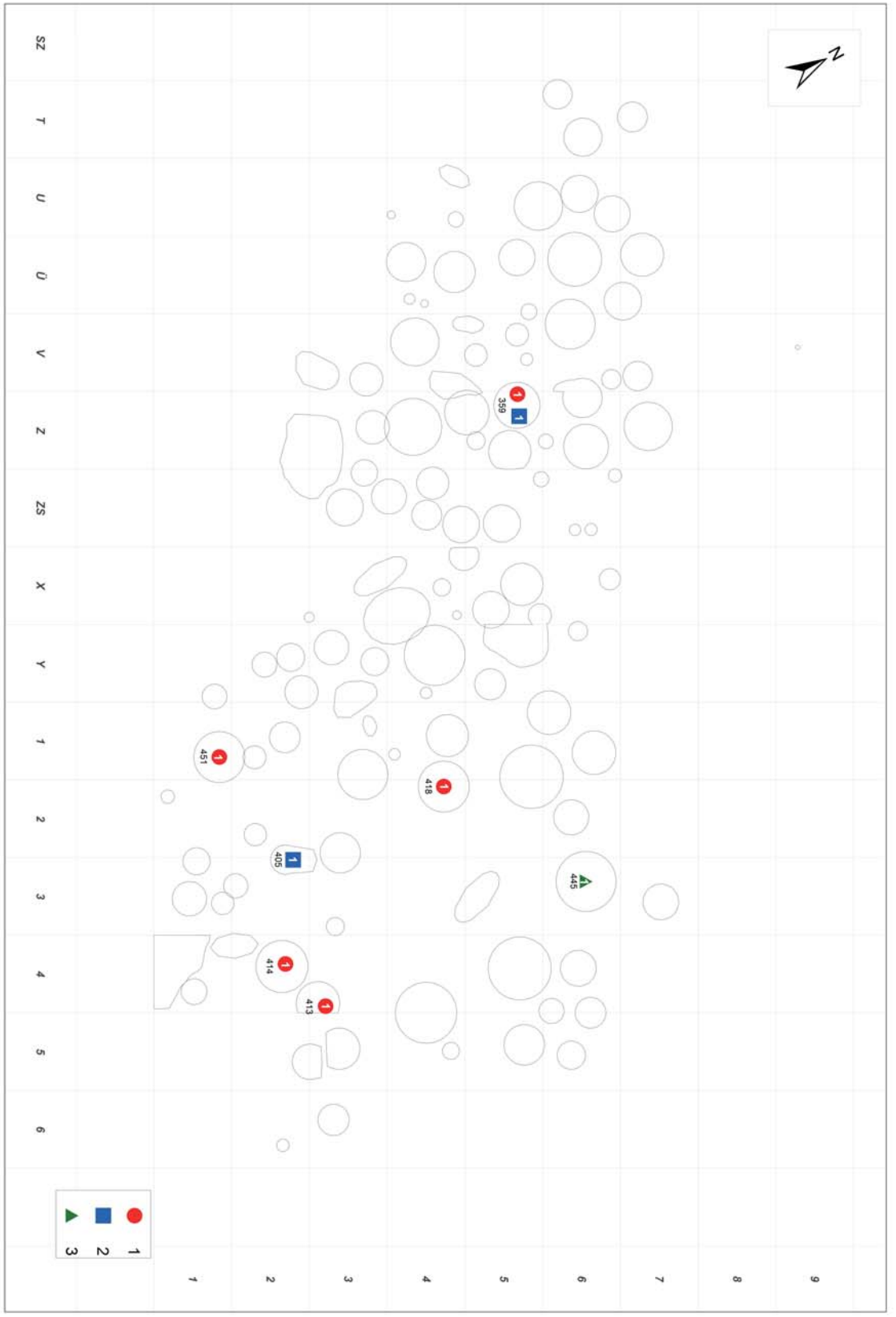


*Figure 31. Pilismarót-Basaharc. Distribution of animal figurines (1), rhytons (2) and wagon models (3) in the cemetery (digital map by Katalin Tolnai; the numbers mark the number of each artefact type in a grave)*

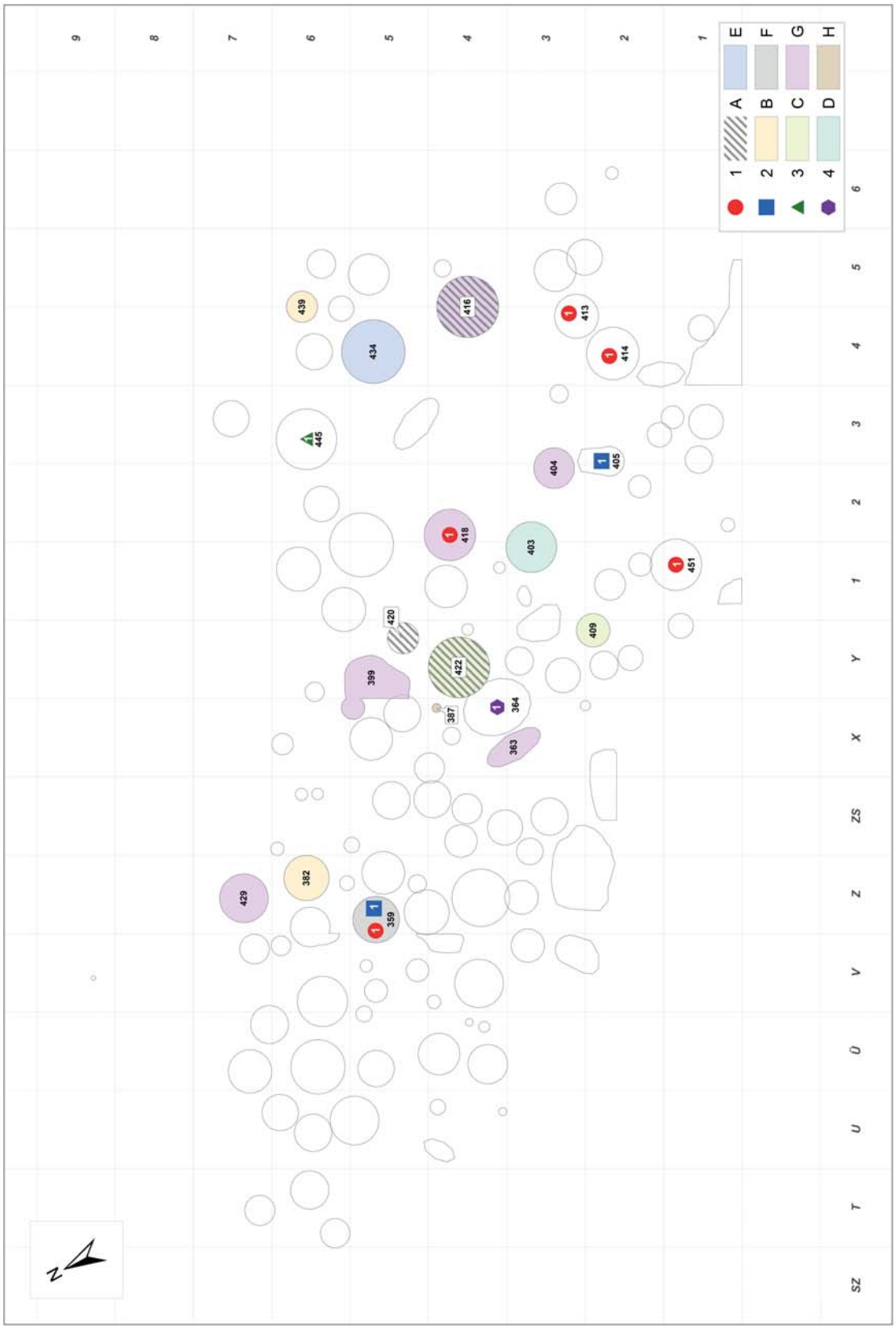


*Figure 32. Pilismarót-Basaharc. 1. Animal figurines, 2. rhytons, 3. wagon model, 4. zoomorphic vessel handle. Distribution of animal bones in the cemetery. A. small ruminant, B. red deer, C. sheep/goat, D. dog, E. horse, F. pig, G. cattle, H. boar (digital map by Katalin Tolnai)*

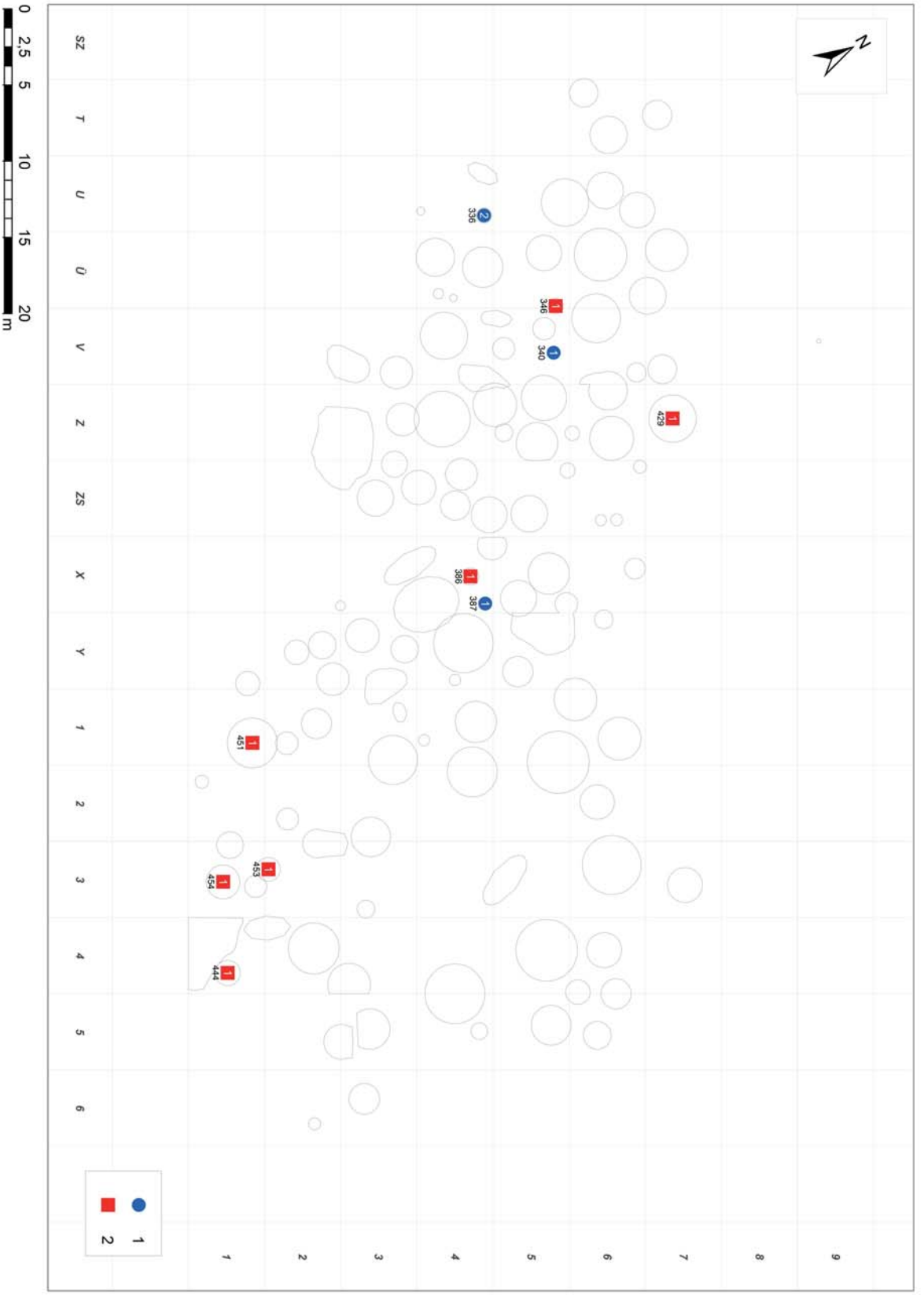


*Figure 33. Pilismarót-Basaharc. Distribution of lithics in the cemetery. 1. Stone axes, 2. chipped stone implements (digital map by Katalin Tolnai; the numbers mark the number of lithics in a grave)*

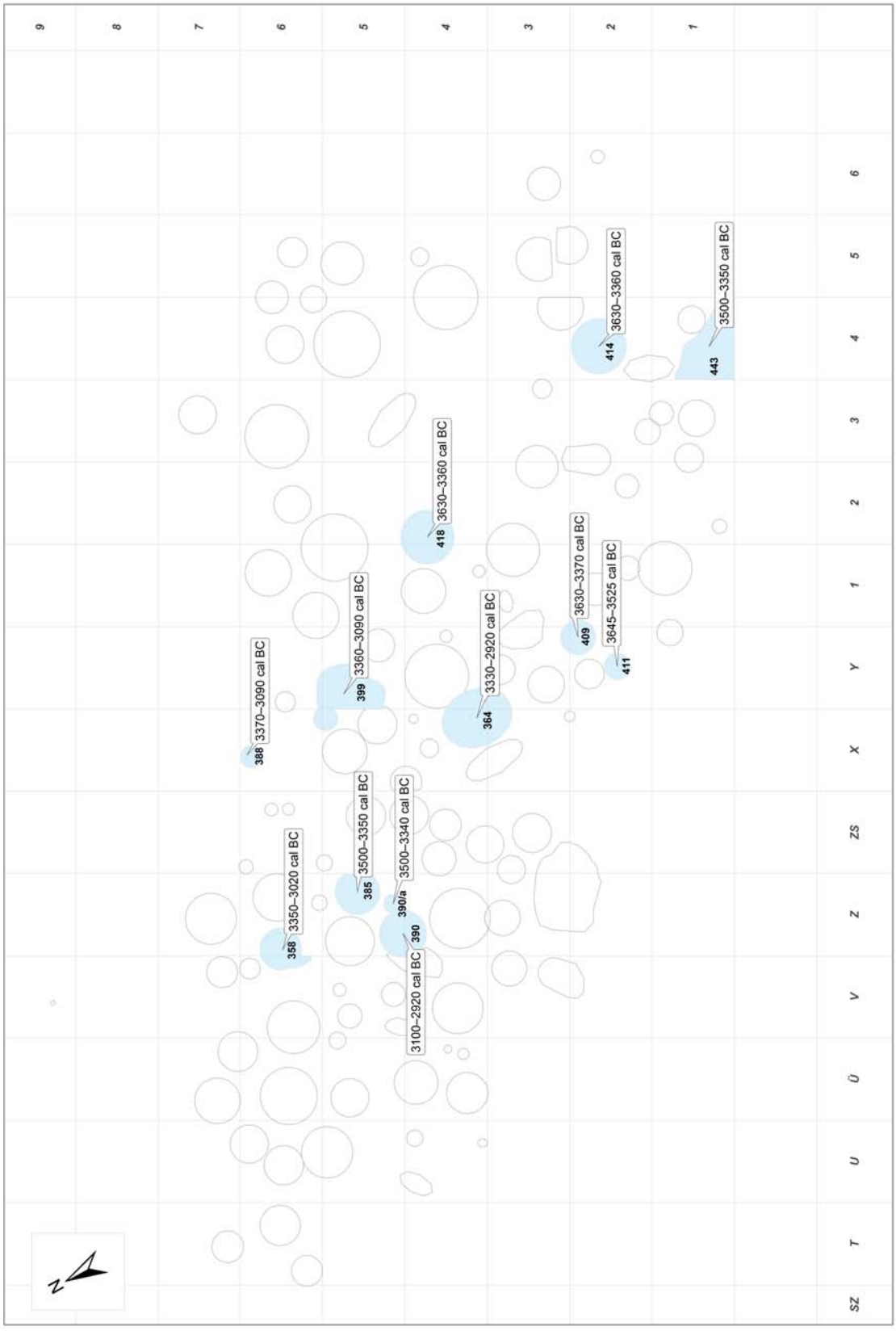


*Figure 34. The radiocarbon-dated graves in the cemetery (digital map by Katalin Tolnai)*

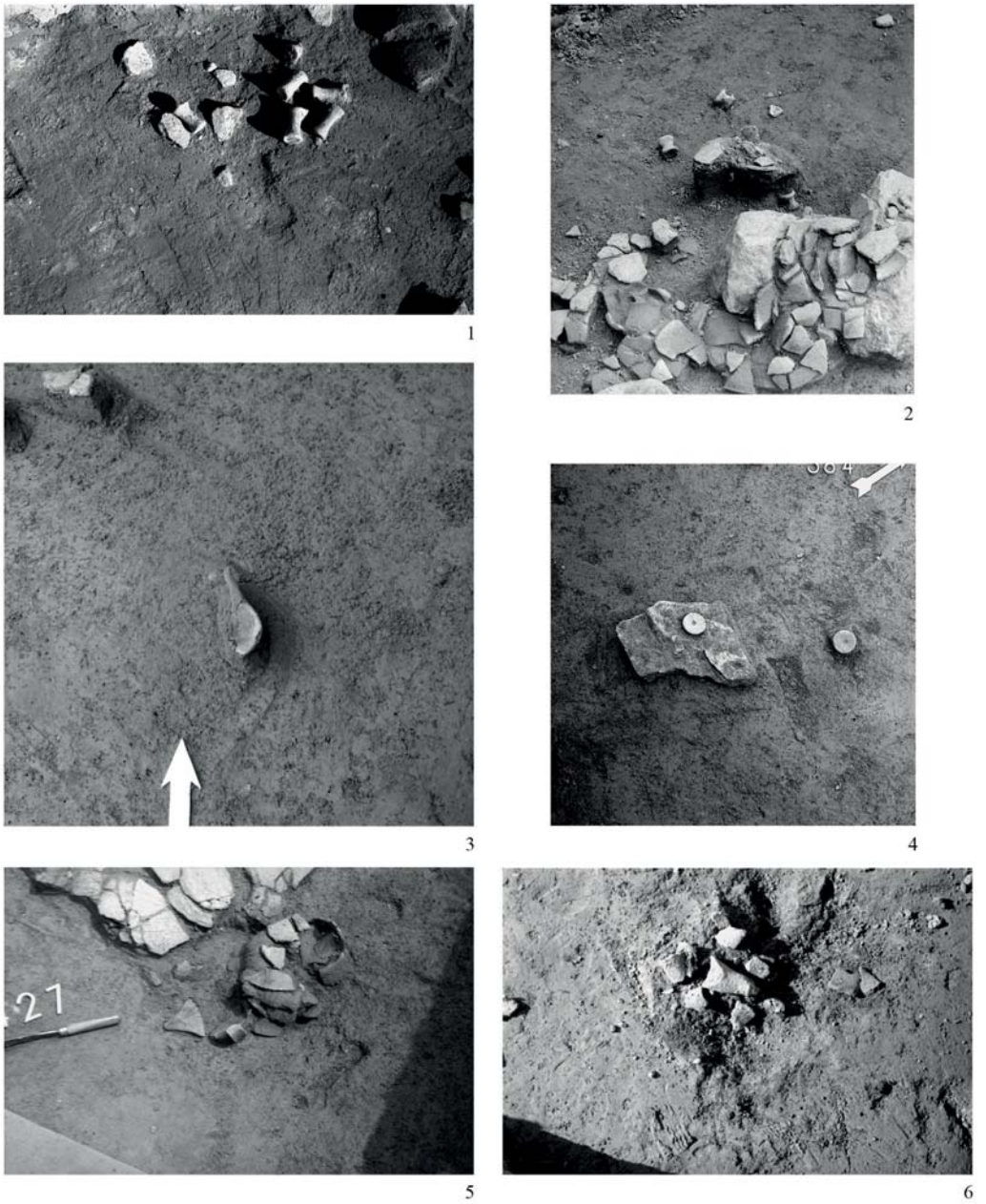


*Plate 53. Pilismarót-Basaharc. Excavation photos of the rare and unusual finds. 1. Rollers in Grave 401, 2. rollers in Grave 439, 3. clay spoon in Grave 387, 4. spindle whorls in Grave 364, 5. stamp in Grave 427, 6. rhyton fragments in Grave 358*

*Plate 54. Pilismarót-Basaharc. Excavation photos of the animal figurines. 1. Grave 413, 2. Grave 414, 3–4. unstratified figurines from the area between Graves 416 and 418, 5. Grave 451, 6. zoomorphic vessel handle, Grave 364*

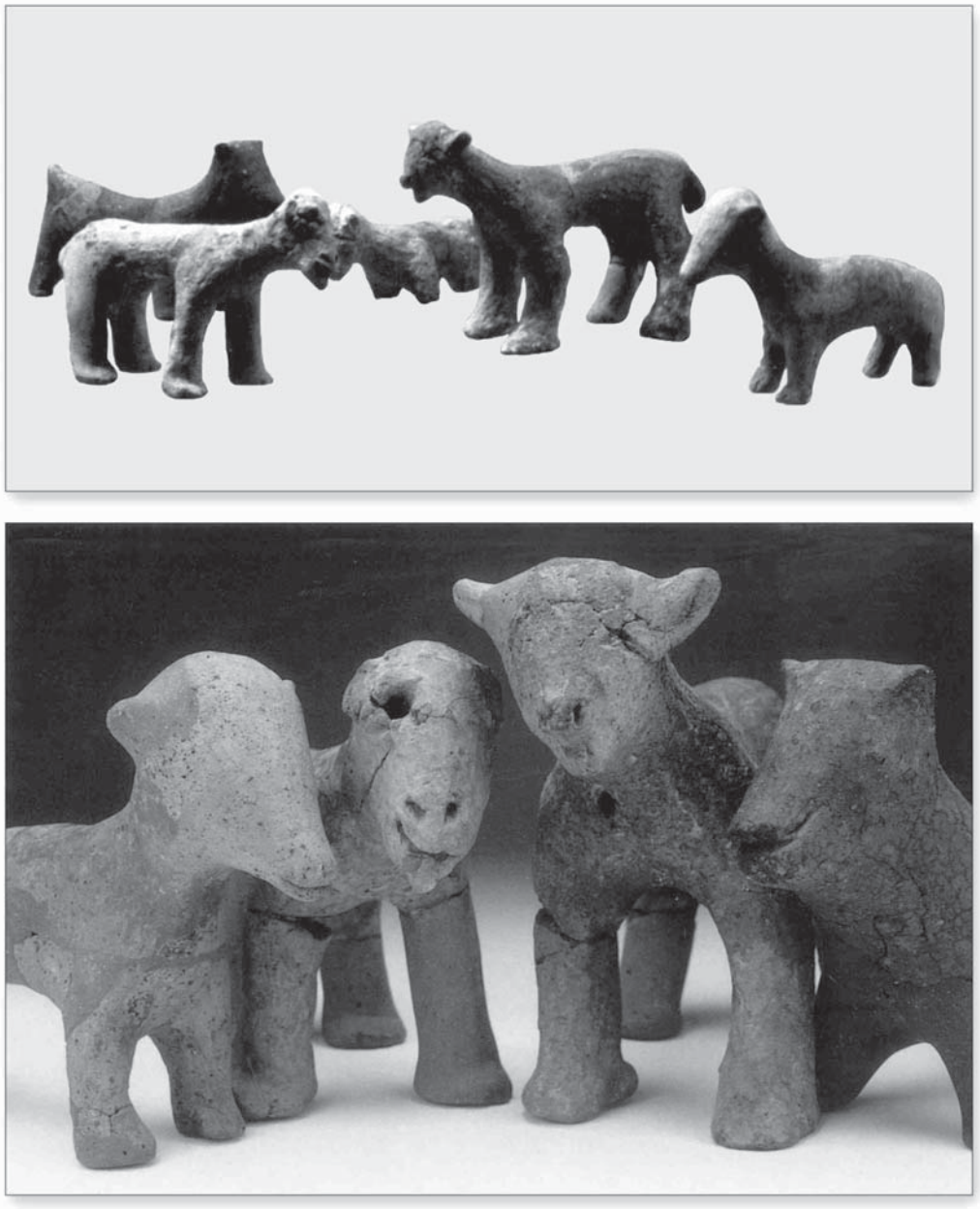

*Plate 55. Pilismarót-Basaharc. Animal figurines. 1. Animal figurines (photo of the exhibition case of the "Idole – Prähistorische Keramike aus Ungarn" exhibition in the Naturhistorisches Museum in Vienna, November 11, 1972–January 21, 1973; photo by István Torma), 2. animal figurines (postcard, Hungarian National Museum, photo by András Dabasi)*

*Plate 56. Pilismarót-Basaharc. Wagon model (photo by Etelka Kövecses Varga)*

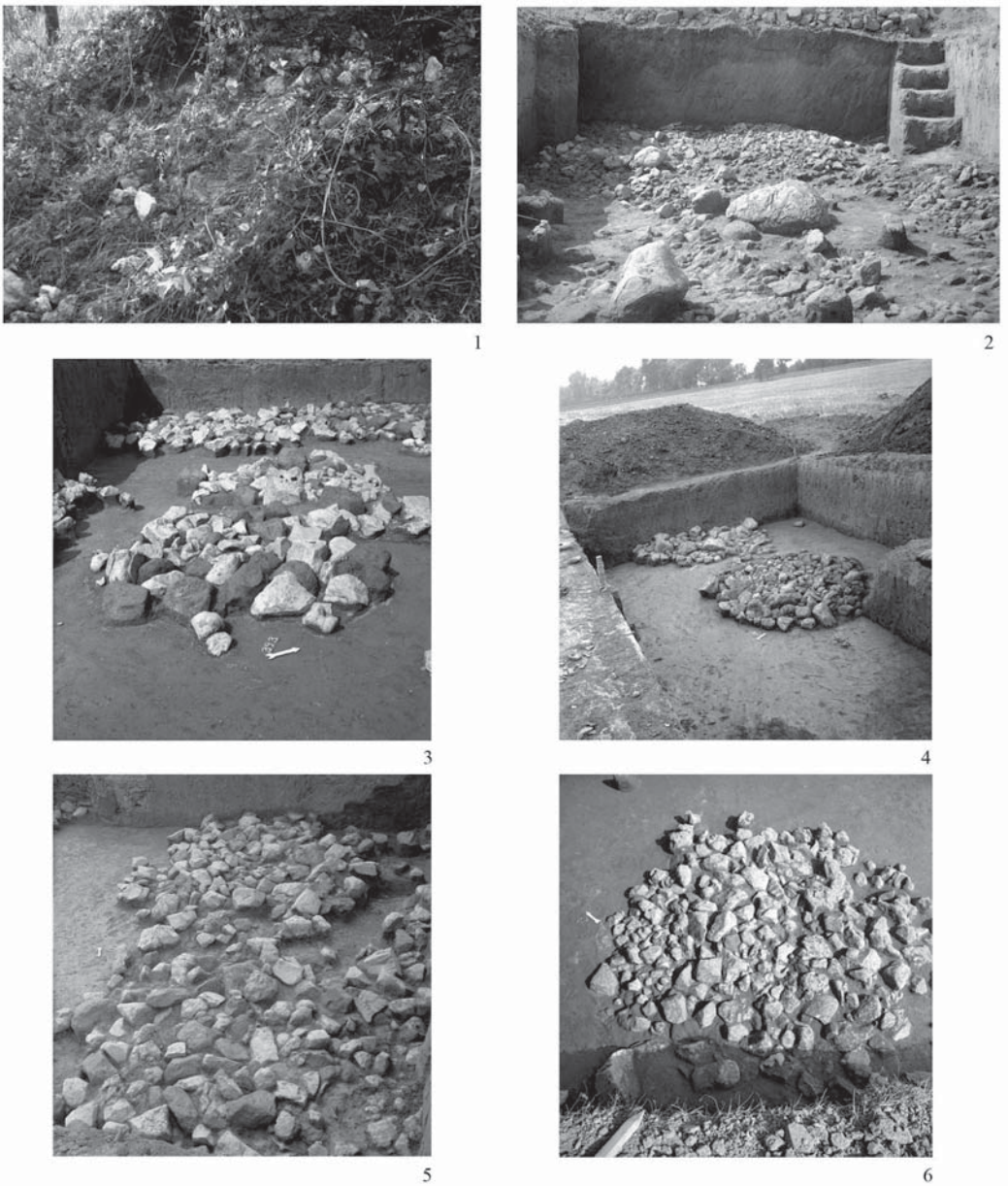

*Plate 57. Pilismarót-Basaharc. Stone-packed graves. 1. The excavation area in 1967, at the beginning of the excavation, 2. Trench y/1, 3. Grave 393, 4. Graves 358 and 382, 5. Graves 390 and 391, 6. Grave 404*

1

2

3

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*Plate 58. Pilismarót-Basaharc. Excavation photos of the Boleráz graves. 1. Trenches ü and v, 2. István Torma during the 1967 excavation season, 3. Trench X/4–5, 4. Trench y/1–3*

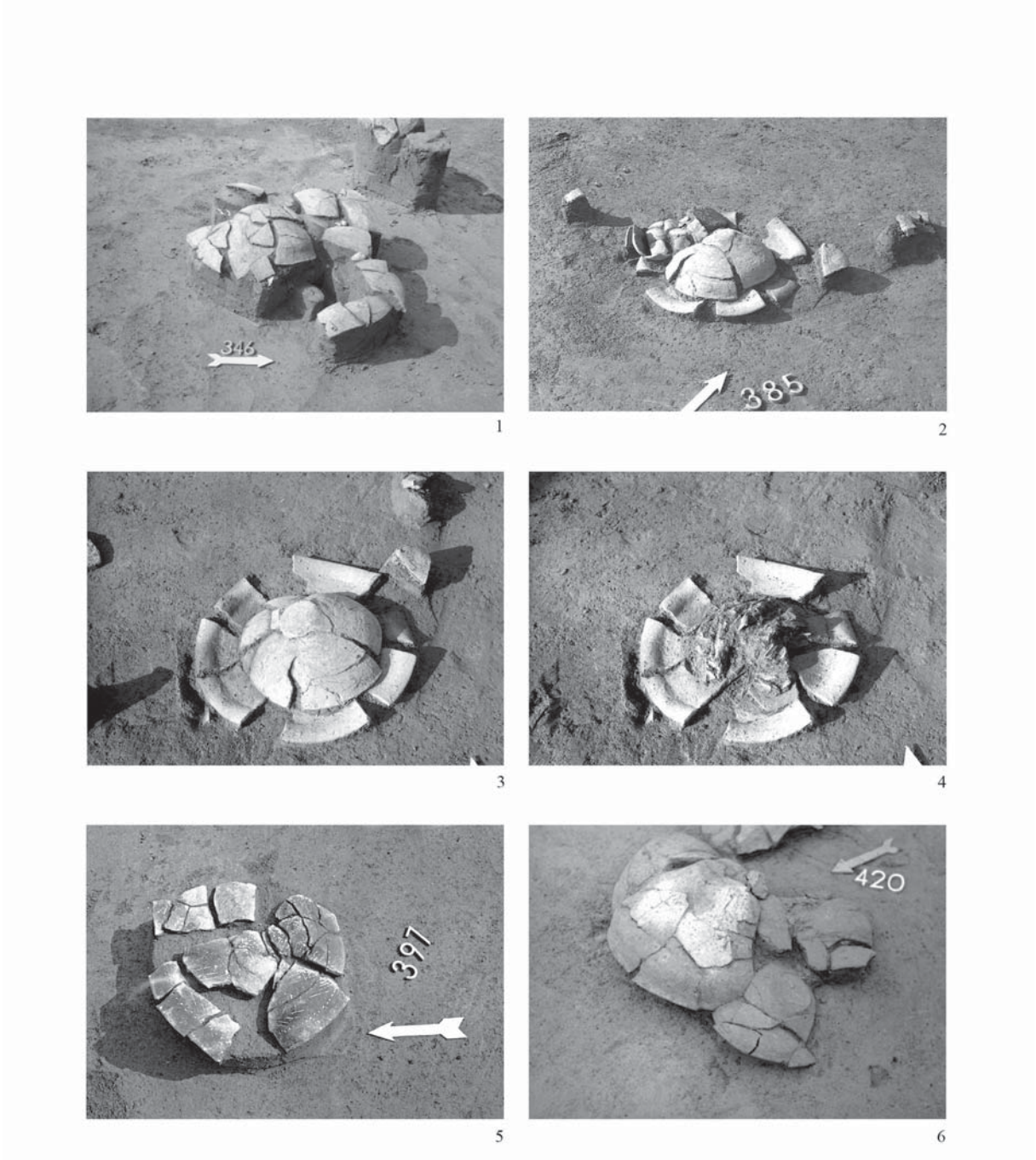


*Plate 59. Pilismarót-Basaharc. Bowls deposited upside down.*
*1. Grave 346, 2–4. Grave 385, 5. Grave 397, 6. Grave 420*

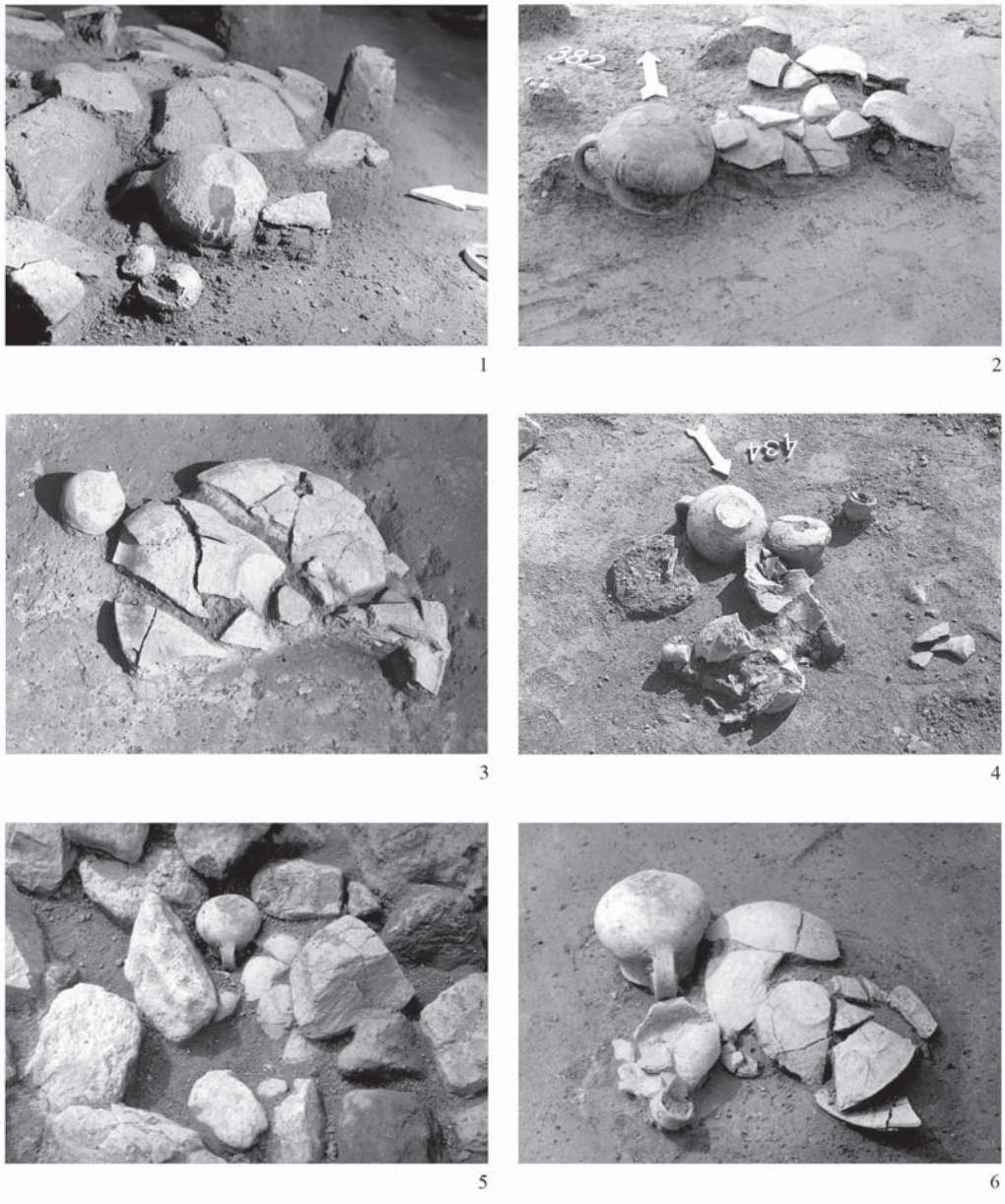

*Plate 60. Pilismarót-Basaharc. Jugs deposited upside down.*
*1. Grave 340, 2. Grave 382, 3. Grave 419, 4. Grave 434, 5–6. Grave 441*

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*Plate 61. 1. Sheep (after www.haziallat.hu), 2–3. sheep (author's photo in Macedonia), 4. sheep figurines from Graves 451 and 359, 5. sheep figurine from Grave 359, 6. sheep figurine from the area between Graves 416 and 418*

# V. CONCLUSION

The imprints of the intra-community power structures of prehistoric communities are best preserved in cemeteries, where the vestiges of economic and social differences between individuals can best be identified. The world of cemeteries, a realm separate from the world of the living, was replete with symbols which encoded a community's customs and social relations from one generation to the next in a fully intelligible form. Unfortunately, very few of these symbols can be decoded and interpreted using conventional archaeological methods.

The "archaeology of death" has received particularly great attention in international research, reflected by the immense number of studies that alone would fill a smaller library. Although first applied in the research of ancient high civilisations (Egypt, Mesopotamia and classical antiquity), this approach is now increasingly employed in the study of prehistoric burial grounds and of solitary burials as well as in the assessment of grave goods, the distribution of the sexes, the materiality of burial customs and the like.[617]

The first professionally excavated, independent burial of the Baden culture was uncovered at Petőháza in 1892.[618] The first "overview" of the culture's burials appeared in János Banner's two studies, each of which had one footnote on burials.[619] In his publication of the forty graves uncovered at Alsónémedi,[620] József Korek also discussed the culture's then known burials.[621] János Banner's monograph on the Baden culture (also called Pécel culture at the time) was published in 1956; however, when analysing the culture's burials,[622] he could only rely on the finds from a few sites, most of which had been uncovered by amateurs.[623] In 1958, two years after the publication of Banner's monograph, Nándor Kalicz uncovered the renowned funerary urns modelled on the human body at Center; given the period's scholarship, these finds were chronologically anchored to Troy and they also gave rise to the theory of a small population group fleeing to the Carpathian Basin from that region.[624] This theory has since been relegated to the annals of research history – according to the currently accepted chronology, the settlement at Troy had not even existed between 3500 and 3000 BC because that settlement was founded at a later date.[625] The investigation of the Budakalász cemetery was begun in 1952,[626] and the same year saw the discovery of the remarkable grave at Vörs, the burial yielding a copper diadem found on the head of the deceased.[627] The biritual burial ground at Mezőcsát was excavated between 1958 and 1962.[628] During the next three decades, the most important burial grounds were uncovered at Pilismarót-Basaharc (1967–1972), Szigetszentmárton (1972)[629] and Balatonboglár (1980).[630]

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[617] Ilan 2002; Howard 2008; Borić 2013; Arponen–Ribeiro 2014; Tunia–Wlodarczak 2014.
[618] Bella 1892.
[619] Banner 1940, 53; Banner 1942. 59.
[620] Korek 1951, with the anthropological assessment of the human remains.
[621] Korek 1951, 41–42.
[622] Banner 1956.
[623] In the late 19th and early 20th century, only the grave inventories were published and very little information was provided on the find circumstances. For example, very rarely did these early publications include grave plans or a plan of the cemetery.
[624] Kalicz 1963.
[625] Bachhuber 2014; Krauß 2014.
[626] The full report on the cemetery was eventually published in 2009: Bondár–Raczky 2009.
[627] Banner 1956, Taf. 87. 4; Bondár 2015.
[628] Kalicz 1999.
[629] Kalicz 1976; one of the burials yielded a wagon model.
[630] Honti 1981.

In his comprehensive treatment of Copper Age burials, Gábor Nevizánsky discussed the burials of the Baden culture based on the finds from sixty-two sites,[631] and he also published the most important information about twenty-five Slovakian sites, one Romanian site, one Yugoslav site and thirty-four Hungarian sites. I complemented his catalogue with additional sites.[632] In a later study devoted to the current state of research on the Baden culture, I added further sites to inventory of Baden cemeteries.[633] Claudia Sachße's doctoral thesis on the graves of the Baden culture, published in 2010,[634] includes the burials from Hungary, based on the author's meticulous and careful study of the data gathered in 2000 in Hungary. The two-volume monograph follows the traditional format: a catalogue of the burials and an assessment of the evidence. The large-scale construction projects from 2000 onward brought an increase in the number of Baden burials; however, most of these are only known from brief descriptions in the preliminary reports. The largest burial ground with twenty-three graves was uncovered at Balatonlelle-Felső-Gamász in 2002.[635] The perhaps most surprising novelty of these salvage excavations was the increase in the number of settlement burials, which have been comprehensively treated by Tünde Horváth.[636] However, large, independent cemeteries comparable to the burial grounds at Alsónémedi, Budakalász and Pilismarót did not come to light during these archaeological investigations and the same holds true for the neighbouring countries.[637]

The interpretation of cemeteries as "ritual spaces" only gained ground in Hungarian research during the past few years. Cemeteries can be assigned to the cognitive sphere in this sense, and some scholars believe that this sphere cannot be decoded using conventional archaeological approaches and methods because its symbolism will always elude scholarship. However, this is not the case. While cemeteries are certainly *not* the direct continuation of one-time life, they are ritual, mystical spaces that have preserved various archaeologically visible imprints of former beliefs, ceremonies and rites.

Traditional archaeological assessments focus on the grave goods, their position in the grave and their analogies. The goal of complex cemetery analyses is to identify the elements of traditions preserved and passed on in the funerary rite and their changes as well as the archaeological imprints of how a community related to its dead, and to draw meaningful conclusions from the analysis.[638]

Archaeologists have since long been preoccupied with the artefacts and phenomena expressing status and prestige in order to gain a better understanding of the internal hierarchy of pre-industrial societies as well as with identifying the social differences that are materialised in cemeteries.[639] Status and prestige are not identical categories, nor are they synonyms of each other. While status indicates social position, rank or some other function within a community that is not necessarily associated with a single person, prestige is, according to the sociological and historical interpretation, the privilege of a single individual. The grave goods deposited in a grave and the funerary rite capture the moment of time after the onset of death, while the analyses of samples taken from the remains of the deceased shed light on the main features of the individual's social position alongside other information such as dietary

631 Nevizánsky 1985, Abb. 1, 265–269.
632 Bondár 1987, 48.
633 Bondár 2002, 13, note 23.
634 Sachße 2010.
635 András Sófalvi's excavation, published by Borbála Nagy (Nagy 2010).
636 Horváth 2004.
637 Sava 2008; Spasić 2010; Horváthová 2010; Krumpel 2012.
638 Rassamakin 2011; Turek 2013.
639 Morgan 1877; Hodder 1982; Renfrew 1984; Chapman 2004; Oestigaard–Goldhahn 2006; Heyd 2007; Kuijt 2008; Furholt 2009a; Budja 2010; Siklósi 2010; Furholt 2011; Kristiansen 2011; Weis-Krejici 2011; Jaeger 2012; Kienlin–Zimmerman 2012; Klaunzer 2013; Boroffka–Boroffka 2013; Raczky 2013; Luneau 2014; Müller 2014; Kristiansen 2014; Delaplace 2015; Creţu 2015.

habits. This provides two temporal planes in our analyses, both of which lie in the past, but represent the duality of the life and the *post mortem* condition of the individual.

In addition to a traditional cemetery analysis, one of my primary goals was to identify the artefacts expressing status and prestige (as well as their other archaeologically visible imprints), and to reconstruct the successive phases of the funeral ceremony.

In his preliminary report on the Pilismarót cemetery, István Torma presented a rough outline of the chronological position and internal chronology of the Boleráz period. He divided the Boleráz period into three phases. He characterised the initial phase with the Koppányszántó-Tímárvölgy and Magyarkeszi sites alongside a handful of other sites. He assigned a part of the Pilismarót burials, the Sárisáp, Süttő and Celldömölk-Sághegy sites together with Nitriansky Hrádok and the Boleráz occupation at Iža to the middle phase, while the last phase was represented by Fonyód type sites such as Pári-Altacker, Tekovský Hrádok, Bajč and Gbelce as well as part of the Pilismarót burials. He described the main traits of the pottery of the three phases[640] and addressed the relation between *Furchenstich* pottery and the Boleráz group as well as the typology and relative chronology of the *Furchenstich* finds from the Pilismarót cemetery.[641] Even though several new sites have been discovered during the past few decades, which led to the elaboration of a spate of new typologies, Torma's initial assessment of the cemetery remains wholly valid and it is now also confirmed by the radiocarbon dates.

Working with the entire material of the Pilismarót cemetery, I focused on the main traits of the different find types in the grave inventories instead of a minute typological analysis down to the smallest detail and ornamental motif. I could check the accuracy of the typochronology of the finds against the radiocarbon dates. The vessels and other finds from the radiocarbon-dated burials occurred in combination with other vessel types in other graves, and thus I could extend the accurate dates to other vessel types too. These burials were so close to one another that I could assign them to one of three chronological horizons, which did indicate the near-contemporaneity of certain graves, but did not enable a finer dating or the determination of the temporal sequence of the interments. It must be again emphasised that it is impossible to determine a particular day, the actual day of the funeral, in the time interval indicated by the calibrated radiocarbon dates obtained for a particular burial using the currently available archaeological and archaeometric methods.

In sum, we may say that the main tendencies of the typochronology and the absolute dates are roughly consistent. Certain changes were perceptible in the find material during the relatively brief use-life of the cemetery, spanning no more than three to five generations, as were the associations on the basis of which a particular burial was assigned to the earlier or later chronological horizon.

In addition to the traditional typological analysis of the finds, I focused on the status and importance of this remarkable burial ground in the Late Copper Age.

In my analysis, I could only rely on the location of the graves, the burials and the grave inventories, as well as on the observations made during the excavation as recorded in the field diaries. There are no written records or reliable depictions from this period to aid our interpretation of the archaeological record. We have no idea of the attitudes to death, of the beliefs about death or the various dimensions of the relation between the living and the dead, or of the meaning of the symbols used during the burial rites. We know next to nothing about the treatment of the dead (preparation of the deceased, mourning, how the community took leave of its departed members) or about the funeral ceremony itself (treatment of the deceased, funerary procession, music, other community activities accompanying the funeral). We are clueless about the events after the cremains had been deposited on the ground – was a funerary feast held in honour of the deceased, and if so, where was it held and was the deceased symbolically

[640] Torma 1973, 496–500; Torma 1977, 54–56.
[641] Torma 1973, 502–505.

present? Nothing has survived of possible recurring ceremonial events, possible rites performed on the anniversary of the death or the funeral, or of any interactions between the deceased and the community's living members. Not one scrap has been preserved of the organic paraphernalia embodying beliefs. All in all, we are unable to gain an understanding of, or reconstruct, a multitude of spiritual and mental elements.

The field observations made among aboriginal peoples untouched by modern civilisation which record their ritual activities and the rites of passage between life and death[642] can be useful for illuminating certain phenomena, but these are essentially only valid for one community and cannot be used for making inferences about prehistoric communities.

Despite these constraints, I believe that I have managed to identify several elements of the cognitive sphere through the analysis of artefacts and the surviving imprints of the funerary rite in the archaeological record. In view of the many uncertainties, it must be constantly borne in mind that the observations and arguments presented here represent but one possible interpretation and that other interpretations of the same evidence can be equally feasible.

The first very important decision was the choice of the cemetery's location. It seems very likely that the community (or communities) burying its dead in this burial ground sought out a landscape, an area that lay near some prominent landmark (such as a river), but at the same time was located far from the period's settlements, one that would be a fitting resting place for the ancestors, one that could not be appropriated by any other community – a point I had tentatively made in my analysis of the Budakalász cemetery, but am more convinced of in the case of the Pilismarót cemetery. The location of the burial ground perfectly fits these assumed criteria. There are no Late Copper Age settlements in the cemetery's broader area, which has been extensively researched. Large-scale excavations were conducted in the area preceding the construction of a planned hydroelectric plant during two different periods and the area was thoroughly combed during later archaeological field surveys. The fields are regularly ploughed and thus the remnants of any larger settlements would surely have been discovered by now.

The choice of the cemetery's location is at the same time a symbolic spatial expression of the ancestor cult: the cemetery associated with the ancestors forges a link between the living members of one or more communities.

The construction of the stone packing followed certain rules whose elements were recorded by István Torma in the field diaries. There are no apparent differences – either chronological or in the grave inventories – between the burials covered with a stone packing and the graves lacking one, and thus the reason for the differences in how graves were marked remains unknown. The marking of the grave may have been part of the funeral ceremony. The construction of the stone packing could have been the visual reminder of where the dead had been interred, but it can also be interpreted as the occupation and appropriation of the area – a practice documented in several cultures – to demonstrate that the ancestors had already lived in that area. The appropriation of land has been observed in both prehistoric and later historic periods,[643] and can perhaps be seen as reflecting the prominence of the link forged to the ancestors, while the choice of the location of the burial ground and the creation of a "grave monument" were an expression of identity.

The archaeological record often preserves the regular patterns in the grave goods accorded to various individuals in prehistoric cemeteries (e.g. different grave goods depending on sex and age). However, no such regularities in the grave inventories can be noted in the Late Copper Age, when the composition of grave inventories was apparently regulated by other principles.

[642] GENNEP 1909 [2007].
[643] CHAPMAN 1981, 80.

A closer look at the position of the vessels in the burials revealed that the primary purpose of the deposition of vessels was not to provide the deceased with food or drink. The function of the bowls and jugs placed in the grave was to preserve, to keep something together. In the assessment of the grave goods, I noted that the articles found in or near the graves could be associated with the funeral ceremony and I assumed that the artefacts deposited in the burials were not selected on a momentary whim, but reflected the community's traditions and unwritten laws about the grave goods to be accorded to various individuals in death or later, on the occasion of subsequent commemorations or ceremonies, or during regularly recurring rituals, much in the same way as did the location of the grave in the cemetery.

We have no way of knowing whether the grave inventories were made up of the personal belongings of the deceased, or whether they comprised artefacts made by community for the departed. What seems certain is that the deceased were not given "uniform funerary packages", and that the articles deposited in the graves were a reflection of the deceased's status or rank in the community as well as of the community's traditions. The grave offerings made by the living symbolically alluded to the identity of the deceased.

I examined and mapped the spatial distribution of the vessel types (both the intact and fragmentary pieces) in the cemetery *(Figs 20–33)*. The goal of this exercise was to discover whether there were any clusters in their distribution, whether indications of status and prestige as well as of a hierarchy and pre-allocated grave locations could be identified based on the occurrence of identical types. The topography of the grave goods gave a positive answer to some of these questions (the distribution of rollers, clay cones, animal figurines, miniature vessels, axes and a few vessel types). The burials with pre-allocated location could be easily identified from the distribution of prestige items in the cemetery. It also became clear that there were roughly co-eval groups lying far apart in the cemetery, which again indicates that the burial places of what had perhaps been smaller communities had been pre-allocated.

The analysis of the spatial patterns in the distribution of various grave good types clearly indicated that the location of the graves was pre-determined – this is clearly reflected by the burials with similar grave goods lying in different spots of the cemetery. The rough contemporaneity of these burials is reflected not only by the typological similarities of their finds, but was also confirmed by the radiocarbon dates in several cases. The other vessel types in the radiocarbon-dated burials enabled the assignation of other burials to one or another relatively narrow chronological horizon that perhaps spanned no more than a generation. This would suggest that the cemetery was the burial ground of individuals with a specific status coming from various families or communities, between whom there was some sort of relation, and were presumably related in some way.

The number of rare and extraordinary finds was strikingly high: over thirty-seven burials (accounting for 33% of the graves) contained sixty-six uncommon finds, among them a high number of miniature vessels. The analysis of these more unusual artefacts enabled the identification of prestige items.

Similarly to other objects whose function is elusive, these "small finds" are usually described as "ritual artefacts" or "toys" in the archaeological literature. Today, the picture is more nuanced and international scholarship has explored the function of several artefact types previously dismissed as "insignificant". It has been persuasively demonstrated that there existed a series of utilitarian objects symbolising personal or community (social) prestige that once embodied a very specific meaning for the community and were associated with particular individuals. The artefacts in this category include stamps, spindle whorls, breast pots and stone axes. Wagon models, rhytons animal figurines more likely denoted social status or a function that could be conferred on others.

Some of the burials in the Pilismarót cemetery contained a single uncommon artefact (Graves 340, 346, 351, 361, 386, 388**,** 390**,** 391, 395, 403, 409**,** 413, 414**,** 418, 423, 427, 429, 432, 445, 447, 453, 454), while others contained several pieces. Two such objects were deposited in Graves 336, 359, 405,

416, 434, 442 and 443, three in Graves 444 and 457, four in Graves 411**,** 439 and 451, and six rollers in Grave 401.

The process of miniaturisation is reflected by several items in the grave inventories (miniature vessels, small finds, animal figurines, wagon model). In the literate civilisations of Antiquity, miniature objects have a clear association with funerary rites, with the perhaps best-documented evidence coming from ancient Egypt,[644] where miniature objects and models had a ritual meaning and were believed to link the present with eternity. Small-sized objects were made from a variety of materials such clay, stone and metal, and their purpose was to ensure the creature comforts of the deceased in the otherworld: they were designed as substitutes for food, beverages and everyday artefacts.[645] It is also striking that normal-sized and miniature vessels occur jointly in the burials.[646]

A discussion of the miniature vessels of ancient Egypt would lead far – I have cited them as an example because the literary records and various depictions on frescoes and steles provide incontestable evidence that the small artefacts crafted from various materials were accessories of the transformation of the deceased into a deity. Obviously, we can hardly draw a similar conclusion in the case of the miniatures from the Pilismarót cemetery – the example of Egypt serves to illustrate one possible cognitive context.

The cremains from seven burials containing miniature vessels were suitable for age at death estimates: these graves were all adult interments, two of which contained male burials. The evidence from the Pilismarót cemetery thus clearly challenges contentions that miniature vessels were toys – they were grave goods accorded to adults.

A closer look at the burials yielding miniature vessels reveals that in some graves there was nothing in the grave inventories, aside form these vessels, to suggest the special status of the deceased (Graves 361, 391, 395, 403, 409, 423, 432, 447), while others contained additional rare and extraordinary artefacts (Grave 387: a clay spoon and a broken stone axe; Grave 388: a large dish-pot, Grave 405: a rhyton fragment; Grave 416: a clay cone or another rhyton fragment; Grave 434: a roller; Grave 442: an intact clay cone; Grave 443: broken clay cones; Grave 444: a broken stone blade, Grave 451: a broken animal figurine and a broken clay cone; Grave 457: three miniature vessels).

Vessels were not the single down-sized, miniaturised objects in the Pilismarót cemetery. Live animals were substituted by their clay counterparts, genuine wagons by their clay models and rhytons, imitations of animal horns in clay, were placed in the burials, albeit in a fragmented condition, as an element of the burial rite/funeral ceremony. These artefacts were uncovered under well-documented circumstances and thus they provide a sound basis for the identifying elements of the funeral ceremony and their interpretation in a broader context.

The distribution of the burials with uncommon finds in the cemetery *(Figs 29–32)* reveals that the burials with animal figurines (Graves 418, 431, 414, 413 and Grave 364 containing the animal-shaped handle), clay cones (Graves 451, 443, 442, 416), clay rollers (Graves 401, 411, 434, 439) and spindle whorls (Grave 364) all lay in the cemetery's eastern part, where the burial with the horse bones (Grave 434) and the spoon with the bird head-terminalled handle (Grave 387) were also located – in other words, the burials with rare, unusual finds show a concentration in a relatively small area. The burial with the rhyton fragment (Grave 405) can also be assigned here. The burial yielding the other drinking horn (Grave 359), which also contained an animal figurine, lay in the cemetery's western part. The zoomorphic relics from the cemetery differ substantially from the Boleráz culture's previously known animal depictions and represent new genres in Copper Age imagery.

[644] Allen 2004; Colin et al. 2014.
[645] Allen 2004, 19.
[646] Allen 2004, 23.

While few animal depictions have survived from the Late Copper Age, the known imagery is strikingly diverse, ranging from the realistically rendered, cow-headed vessel, an elegant artistic creation in its own right, to schematic animal figurines, the stocky statuettes from Pilismarót and the animal head protomes as well as the free-standing figurines yoked to wagon models and the animal figurines applied to vessel rims or vessel bodies.

Despite the period's well-documented and widespread cattle cult (immense numbers of cattle were scarified, butchered, dumped into settlement pits, interred with humans or independently, the animal bone samples are dominated by cattle), the single currently known cattle portrayal is the cow-shaped vessel from Vác. The other clay relics that can be associated with cattle are the clay rhytons from the Pilismarót cemetery. The cattle horn that was perhaps also used as a drinking vessel was modelled from clay and deposited on the stone packing of Grave 359 as one of the concluding acts of the funeral ceremony. Another fragment of a similar rhyton was deposited in Grave 405.

The larger animal figurines, differing substantially from the previously found small figurines of the Late Copper Age, portray different species. It must also be borne in mind that the clumsily-rendered figurines from Pilismarót were modelled on rarely seen or encountered animals[647] that played a particularly important role in the community's life. They in part expressed prestige and were in part commodities embodying wealth, explaining why the animals were not slaughtered before their time and buried with their "master". Miniaturisation solved the problem: a scaled-down version of the animal was placed in the grave, ensuring that the human person and the animal remained companions even after death, a reflection of the special community status that was conferred on the deceased person's successor who came into possession of the living creature.

The existence of a richly diverse animal imagery in clay in addition to the cattle cult that involved the sacrifice of real animals would suggest that various species played different roles and had altogether different measures of importance attached to them in the daily life and the burial rites of Late Copper Age communities.

Animal figurines are generally interpreted as ritual devices or toys in the archaeological literature. Obviously, neither interpretation can be rejected out of hand. The anthropological examination of the cremains indicated that four of the graves yielding animal figurines were adult burials (Graves 359, 414**,** 418**,** 451, the latter perhaps containing the cremains of a male). Grave 413 did not contain any cremains. The zoomorphic vessel handle from Grave 364 comes from an adult, probably from a female burial, while the calcined bones from Grave 387 yielding the clay spoon were unsuitable for an age and sex determination. Even though there are no anthropological data for some burials, it is quite clear that the zoomorphic finds were *not* associated with children.

A look at the other object in the grave inventories of these burials reveals that the finds from Grave 356 comprised two zoomorphic relics: an animal figurine and a rhyton, the clay imitation of a cattle horn, as well as two lavishly ornamented bowls. The zoomorphic handle from Grave 364, a possibly female burial, was found together with two spindle whorls (solely occurring in this grave) and an assortment of pottery fragments. Grave 413 contained an animal figurine and a broken vessel, similarly to Grave 414, which had nothing but vessel fragments in addition to the animal figurine. The animal figurine portrayed in a half-lying posture from Grave 418 was accompanied by indistinct vessel fragments. Aside from the animal figurine, the other unusual find from Grave 451 was a broken clay cone.

During the study of the burials with miniature vessels, I noted that various other items in the grave inventories enhanced the "prestige index" of these graves. It would appear that the same holds true for the burials containing animal figurines, to which additional items were added in order to highlight the

[647] Wool sheep (BONDÁR 2012a, 55) and horse (cp. Erika Gál's study, pp. 367–379) both appeared at roughly this time in Central Europe, and it is therefore feasible that some of the figurines depicted these species.

importance of the deceased (Graves 356, 364, 451). Mention must be made of Grave 434 in which two horse bones were identified. The other extraordinary finds from this burial were a clay roller, a miniature suspension vessel and a rare jug type, all prestige items reflecting the deceased's special status, and it therefore seems likely that the horse bones too reflected this status.

In addition to their ritual role, miniature objects were devices designed to substitute: instead of slaughtering the live animal representing economic wealth or burying "insignia" (such as wagons and other symbols of rank and power) with the deceased, the down-scaled copies of these items were deposited in the graves.

While fully aware of the fact that the spiritual meaning attached to various objects and various dimensions of the past remain hidden to us, the small "slices" of the past we are able to uncover and the converging archaeological evidence seems to confirm that the group of special, uncommon objects identified in the above can be interpreted as items reflecting status or prestige in the Pilismarót cemetery. The different lines of inquiries all pointed to the same conclusion: the location of the roughly co-eval burials in different spots of the cemetery suggest that certain members of a smaller community (perhaps a family or a settlement) or communities could bury their deceased in pre-allocated locations and that this was the main principle behind the cemetery's spatial organisation. This was confirmed by the spatial distribution of the various find types, and in particular of the prestige items.

The distribution of rare, uncommon objects embodying some sort of social distinction strongly suggests that the Pilismarót cemetery was an unusual burial ground not only in terms of its archaeological finds, but also among the cemeteries of the period's communities.

Aside from the visible predisposition for miniaturisation and the high incidence of items denoting status/prestige, the possibly most intriguing symbolic phenomenon is represented by the archaeologically visible imprints of the principle of *pars pro toto* ("a part for the whole"), a principle that appears to have been consistently applied. The ritual significance of deliberately broken vessels has since long been recognised.[648] The deposition of deliberately broken artefacts in the burials of the Pilismarót cemetery can be noted in the case of artefacts other than pottery too: broken animal figurines, rhytons, rollers, clay cones and stone artefacts regularly appear in the grave inventories.

A similar *pars pro toto* selection could be noted in the case of the human remains too. In her assessment of the cremains, anthropologist Kitti Köhler found that calcined bones were only collected from certain bodily parts of the cremated deceased. It is possible, then, that the graves apparently lacking cremains were not "devoid" of human remains, but were symbolic burials. The same phenomenon was noted in the case of the animal bone sample: only certain body parts were selected for placement in the burials. We may therefore assume similar cognitive patterns and beliefs behind the selective deposition of cremains, animal remains and fragmented artefacts.

It seems to me that the artefactual remains of the funeral ceremony and the surviving imprints of the cognitive patterns governing the funerary rites is also reflected in the *pars pro toto* selection of the community's members who were buried in the Pilismarót cemetery – in other words, certain burial grounds were not the resting places of the entire population of a settlement, but only of a few select members, a pre-determined part of the whole, as we can see from the meticulous analysis of the Pilismarót cemetery.

The Pilismarót-Basaharc cemetery remains an unparalleled site of the Late Copper Age. The 110 burials spanning the roughly 140 years of the cemetery's use-life have yielded convincing evidence that it was the burial ground of the select members of several communities who had been interred according to an identical rite and had been accorded grave goods befitting their social status. In brief, the Pilismarót cemetery acted as the burial ground of the period's elite from various communities.

[648] CHAPMAN 2001; CHAPMAN 2013, 22–23.

Together with my colleagues, I came to a similar conclusion regarding the Budakalász cemetery. The burial ground had a relatively short use-life; the grave goods and the relative chronology of the burials indicated that only select members of one or more communities were laid to rest in the cemetery.[649] The assessment of the twenty-three burials uncovered in the Balatonlelle-Felső-Gamász cemetery pointed in a similar direction.[650]

The remarkably high number of prestige items and the surviving imprints of various ritual and cognitive elements in the Pilismarót cemetery furnish evidence for the existence of separate burial grounds for the period's elite. The cemetery represents yet another independent burial ground reflecting the divergences between Late Copper Age communities, their social complexity and sophisticated beliefs. The patterns registered in the Varna cemetery find their counterpart in the burial grounds of the Carpathian Basin: regional or supra-regional burial grounds lying far from the settlements, the resting place of the "select few", forging a link between various communities as well as with the ancestors, creating thereby an enhanced awareness of the past in the traditions of these communities. To put it otherwise: the sense of cohesion was an expression of social inequalities, of an incipient social ranking, rather than of being part of a community. These special burial grounds were "open" to the elite, which bound together the groups living on different settlements and thus formed a larger social community. This, in turn, is an indirect reflection of a rigorously structured, well-organised life.

One might reasonably ask where the community's average members were buried if the elite had their own burial grounds. The burials of the Baden complex reflect extremely diverse mortuary practices. The complex's graves include both inhumation and cremation burials. Very often, a grave contained several burials, but skull burials and symbolic graves (the latter often empty or containing but a few artefacts) are also known. Some graves contained both human and animal burials. The deposition of the ashes in urns modelled on the human body represent a most singular mortuary rite. On many sites, complete or partial human remains were found dumped into a pit alongside "ritual animal burials". The interpretation of vessel hoards still eludes scholarship.

The above elements and phenomena are a reflection of complex beliefs and of elaborate mortuary rites, through which we can catch a glimpse of intricate and diverse human relations, the blend of traditions, and communities with differing ancestries and customs, differing social order and subsistence practices.

In my earlier studies, I suggested that a concentration of uncommon finds, larger settlements and/or cemeteries as well as the imprints of unique practices (mass graves, deceased "buried" in settlement pits, an unusually high number of slaughtered animals, etc.) can be noted in certain areas, which is not a reflection of archaeologically more intensively investigated territories.[651] These regions played an important role in ritual life as shown by the more frequent incidence of rare ritual finds (figurines, wagon models, breast pots and the like). The joint occurrence of certain elements can perhaps be seen as an indication that a rudimentary process of "urbanisation" had begun in certain regions alongside the emergence of central places that could have grown into central places: the archaeological record indicates the presence of larger central settlements with a host of intermittently occupied smaller satellite settlements around them. The focus of community life and of community organisation was pegged to the central settlements. Regions of this type can be identified in modern Pest, Komárom-Esztergom and Borsod-Abaúj-Zemplén Counties as well as along the southern Balaton shore and in the Little Balaton area. All we have at present is a fragmentary mosaic with many missing pieces, but the broad outlines of the picture are clear and, more importantly, they are backed up by the archaeological evidence.

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[649] Raczky 2009, 480; Siklósi 2009, 465–466; Bondár 2009a, 297.
[650] Nagy 2010, 425.
[651] Bondár 2006a, 113–114; Bondár 2008a, 227–229.

The Late Copper Age (3600/3500–3000/2800 BC) saw the introduction of several major innovations such as the wheel and various wheeled vehicles and the secondary exploitation of animals for their milk, wool and traction power (the latter was termed the Secondary Products Revolution by Andrew Sherratt[652]), as well as the appearance of wool sheep, the domestication of the horse, distinctive metalworking regions, the custom of raising burial mounds over the deceased, and burial steles.[653] These innovations and novelties were precipitated by radical social and economic changes. New innovations and inventions as well as new subsistence practices were only born or adopted in regions where environmental conditions and the available economic resources were conducive to this, and where there was a definite social demand for these innovations. Most of these innovations were initially linked to the cradle of civilisation, to Mesopotamia and Anatolia. More recent research has convincingly demonstrated the existence of three major centres of innovation: in addition to Mesopotamia and the Ancient Near East, there is evidence that the Maikop culture[654] of the Caucasus and the Baden complex of Central Europe were the two other cultural milieus, where new inventions and innovations regularly appeared. The identification of the region(s) where the Copper Age innovations and inventions first appeared lends particular importance to the Carpathian Basin, where these innovations all appear, and, moreover, it would seem that one of the centres of the invention of wheeled vehicles lay in this region, as suggested by the date of several more recent finds.[655]

The imprints of various cognitive elements and other phenomena preserved in the archaeological record from Pilismarót reflect an intricate system of well-structured, well-organised communities, with settlements occupying different – prominent or less prominent – positions within the "whole", a reflection of how the principle of *pars pro toto* permeated daily life across the Baden complex: although the relations between individual communities were not egalitarian in nature, these strands made up the broad tapestry of the Baden complex and its society.

This, then. was the principle that governed the symbolism of Late Copper Age cemeteries: a "selection" in the choice of location, of grave goods, of rare and extraordinary objects and, finally, of people. The Pilismarót cemetery is another eloquent testimony to the profound changes and social transformations in the life of Late Copper Age communities.

[652] SHERRATT 1981; SHERRATT 1983; GREENFIELD 2010.
[653] HANSEN 2014; SCHIER 2014.
[654] IVANOVA 2012; KOHL–TRIFONOV 2014.
[655] BONDÁR 2012, 91–101.

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# THE HUMAN REMAINS FROM THE BOLERÁZ BURIALS UNCOVERED AT PILISMARÓT-BASAHARC

KITTI KÖHLER

## Introduction

A total of 110 Late Copper Age burials were uncovered at the Pilismarót-Basaharc site during the excavations conducted by István Torma between 1967 and 1972. The cremation burials could be assigned to the Boleráz phase/group, representing the early Baden period.[1]

The Late Copper Age population (proto-Boleráz, Boleráz and Baden cultures) has been studied through 768 skeletal remains from 39 sites *(Table 1)* in the anthropological literature.

Only the skeletal remains from a single burial place (Abony-Turjányos-dűlő) of the proto-Boleráz phase have been examined in Hungary to date. This site yielded single and double intramural inhumation burials, of which the latter were in part interpreted as being ritual depositions.[2] Although the burials of the next period, the Boleráz phase, are known from more sites, these are predominantly cremation burials and the overwhelming majority of the human remains from these sites have not been submitted to anthropological analyses.[3] In contrast, the greater part of the skeletal material from many sites of the culturally uniform Baden culture, distributed over an extensive area, has been anthropologically examined. Anthropological research on the formative and early period of the Late Copper Age is currently at a standstill, owing to the low number of burials in the case of the former and the dominance of the cremation rite in the case of the latter.

## Methods for the assessment of cremated human remains: potentials and limitations of an analysis

Small fragments of burnt human bones are usually all that survive from inurned and scattered cremation burials. Given that these bone fragments are very small and usually poorly preserved, they were rarely deemed notable enough for collecting and preservation during earlier excavations. Today, however, it is a basic requirement to record in detail the contexts in which they are found during their excavation since this provides additional information for the overall assessment.[4] One essential requirement during the excavation of inurned burials is that the urn containing the ashes be lifted with the earth *in situ* and that the earth from the vessel be removed layer by layer, followed by the examination by the anthropologist. In the case of scattered cremation burials, it is vital to meticulously document and describe the find circumstances of the human ashes found during an excavation since this can contribute valuable insights regarding the burial rite and deposition.[5] Unfortunately, this information has been lost in the case of earlier excavations and thus both archaeologists and anthropologists can solely rely on the surviving documentation (field diaries, excavation reports, photo documentation). More recently, the lack of a

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1 MRT 5, Site 17/10.

2 Hansel–Marton 2006, 173–174; Fábián–Serlegi 2007, 149; Fábián–Serlegi 2008, 157; Köhler et al. 2009a, 5–22; Köhler et al. 2009b, 41–46.

3 Bondár 2002, 13.

4 Köhler 2006; Howard 2008; Pap et al. 2009; Asmussen 2009; Gonçalves et al. 2011.

5 Ubelaker 2009; Pap et al. 2009.

desirably meticulous field documentation can be ascribed to the finite capacity and the time constraints on the large-scale salvage excavations conducted over extensive sites with a high number of burials.

In order to gain a better understanding of the process of cremation and the condition of the human bones after cremation, I visited the Csömör Cemetery and Crematorium, where I could familiarise myself with the procedure of modern cremation.[6] The body of the deceased is not wholly reduced to ashes during cremation even today. In the Csömör cemetery, cremation is performed in furnaces lined with fire bricks heated by gas into which the refrigerated body is placed in a coffin. The temperature in the furnace is first 900 ºC, which is then raised to roughly 1100 ºC (this is the temperature of the furnace, the flames have a higher temperature). The air is blown in from the sides and from underneath as well to increase the intensity of combustion. The cremation of an individual lasts at least one or one and a half hours under these circumstances. The duration is strongly influenced by the individual's weight and even by different pathologies. Cremation is followed by the removal and cooling of the ashes in a vessel made specifically for this purpose. When the body is cremated at a uniformly intense high temperature, larger, roughly 5–15 cm large bone fragments are recovered from the furnace *(Pl. 1)*, which are then pulverised into roughly 4 $mm^3$ large fragments because otherwise the remains would not fit into the urn *(Pl. 2)*. The intentional crushing of the ashes (pulverising the remains) was probably performed in prehistoric and ancient times too, although probably using a different procedure, which can no longer be reconstructed.

Returning to the anthropological assessment of the cremains (cremated remains), the first step is the arrangement of the bone fragments according to anatomical position, separating the skull and the different post-cranial bones *(Pls 3–14)*. One very important aspect is the determination, based on the different size, thickness and structure of the burnt bone fragments, of whether there are any burnt or unburnt animal bones among the human cremains, an exercise that does not pose any problems for an experienced anthropologist.[7]

The next step is the determination, if possible, of the sex and age at death of the deceased. This is essentially based on the same principles as in the case of non-cremated human remains.[8] This is followed by the quantification of the cremains, by determining the number and weight of the calcined bone fragments. Opinions are divided regarding the information that can be recovered from the quantification of cremains. Some researchers believe that children and adults can be clearly distinguished, the sex of the deceased can be determined and that even the commingled remains of several individuals can be easily separated,[9] while others flatly reject that this demographic information can be obtained from the amount of the cremains,[10] because their condition is influenced by several factors such as the mode of cremation, the way the cremains are collected as well as various post-depositional, taphonomic processes and erosion. It is uncertain whether all the cremains were collected from the pyre after cremation and whether all were then deposited and buried in the urn/grave pit (cp. partial and symbolic burials). The disturbance of the burials in later periods as well as the lifting of the cremains during the excavation can likewise affect their condition and the results of their analysis.

Five different grades are generally distinguished regarding the size of the bones and their fragmentation: hyper-micro- (less than 0.5 cm), micro- (0.5–1 cm), meso- (1–5 cm), macro- (5–7 cm) and hyper-macro- (over 7 cm) fragments.[11] The size of the calcined bones is also influenced by several

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[6] I would here like to thank Ervin Jávor, director of the cemetery, for making my visit possible and for his kind permission to publish the photos made during the procedure of modern cremation.

[7] Gejvall 1963; Nemeskéri–Harsányi 1968; Grévin et al. 1998.

[8] Nemeskéri et al. 1960; Éry et al. 1963; Nemeskéri–Harsányi 1968.

[9] Nemeskéri et al. 1968.

[10] Chochol 1961; Ubelaker 2009.

[11] Chochol 1961; Nemeskéri–Harsányi 1968.

factors such as the temperature of the pyre, the manipulation of the body on the pyre during cremation, and the collection and deposition of the cremains after cremation.[12] Additional fragmentation can occur during the burial of the cremains along the cracks and fissures appearing during the cremation process.[13] Larger bone fragments are usually an indication of imperfect burning (at a lower temperature and for a shorter time), while smaller fragments usually reflect more thorough burning (at a higher temperature and for a longer time), or that the still glowing remains were suddenly affected by a large temperature change.[14]

The extent of the deformation of the remains as well as the nature and pattern of the cracks and fissures must also be recorded because this information can contribute to determining whether a shorter or longer time had elapsed between the cremation of the body and the burial of the cremains. One of the observations made in modern crematories and during experimental cremation is that if the body is cremated no more than one or two weeks after death, the bones usually bear curved, transversal cracks and irregular longitudinal fissures, and that the long bone fragments undergo significant warping and deformation. If, however, a longer time elapses between death and cremation (weeks or even months), the bones have longitudinal fissures and surface cracks, and the fragments are barely deformed or not at all.[15] The presence of fissures and cracks obviously also depends on the extent of coverage with muscles on different body parts, which provide some protection for varying lengths of time for the skeletal elements against the impact of heat.

The colour of the cremains is similarly recorded. The colour of the burnt bones is influenced by several factors.[16] In the case of cremation at a lower temperature (200 ˚C), for example, the colour of the bone fragments resembles that of unburnt bones. In the case of a slightly higher temperature (300 ˚C), the fragments turn brownish, then metal-blue and blackish, owing to the charring of the organic content (collagen). In the case of cremation at a high temperature for a long time (so-called complete/intense cremation at 800 ˚C or higher), the fragments acquire a typical chalk white colour. The colour hue is also influenced by the structure and size of the bones, determined by their function and anatomical position. A skull and a long bone burn quite differently, and there are even divergences in how the middle section of a long bone and its spongy ends burn, while a vertebra composed of cancellous and cortical bone again burns differently *(Pls 7–8)*.

The wood used for the pyre too affects combustion,[17] as does the time when the trees were felled. If the wood is too wet, it burns more slowly and less intensely. When the tree is felled, its water content

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[12] In India, the bone fragments are crushed with a strong stick by the deceased's eldest male relative after the cremation and a jug of water is poured over the surviving remains, leading to further fragmentation (Winter 1912).

[13] McKinley 1994.

[14] In his experimental cremation of animal bodies, Géza Szabó (2004) did not always wait for the pyre to burn down completely, but poured water over the still glowing embers. The sudden heat effect led to the further fragmentation of the larger bone fragments and bone remains that had a chalk-like consistency. The manner in which the funeral pyre was put out is described, for example, in Homer's *Iliad*. After completing the funerary ceremony for Patroclus, Achilles order the pyre to be put out:

> "Atrides – chiefs of Achaea's united forces –
> first put out the fires with glistening wine,
> wherever the flames still bum in all their fury.
> Then let us collect the bones of Menoetius' son Patroclus."
> (Homer, *Iliad*, Book 23: 271–274, tr. by Robert Fagles)

[15] Baby 1954; Ubelaker 1989; Ubelaker 2009.

[16] Shipman et al. 1984; Walker–Miller 2008; Ubelaker 2009.

[17] The calorific value of different tree species varies significantly. Conifers, for example, burn with greater flames (owing to their resin content), but produce less heat than beech or oak.

accounts for roughly 50% of its mass, and it became air-dry after about a year. A pyre of relatively recently felled trees thus slows combustion.

As we can see, there were several ritual elements that affected the further transformation/deformation/fragmentation of the bones during cremation and afterwards, as part of the burial rite. Additionally, the preservation and condition of the cremains is also affected by their treatment and washing, and, in the case of scattered cremation burials, the composition of the soil and its chemical processes.

## Material and method

Only about one-third of the 110 burials uncovered in the cemetery yielded calcined bones suitable for an analysis; 37 burials did not contain any cremains, while the cremains from 23 burials were not preserved. The remains of 50 individuals could be distinguished, most of which were poorly preserved as regards both the quantity and the quality of the cremains *(Pls 3–4)*. The bone fragments among the cremains were mostly more closely unidentifiable fragments (generally from long bones), which made a basic demographic assessments virtually impossible in most cases and also constrained a study of how the body had been cremated.[18]

I followed the standard procedures set down in the academic literature for the assessment of the cremated human remains.[19] The age estimation for children was based on dentition and metric traits, as in the case of human remains from inhumation burials.[20] The age at death for adults was determined from the closure of the cranial sutures[21] and, in some cases, from dental attrition[22] as well as from the internal structural changes in certain bones (e.g. caput femoris/humeri).[23]

The sexing of cremated individuals is essentially performed according to the same criteria as in the case of unburnt remains. However, heat-induced shrinkage and deformation make the study of certain traits difficult and therefore I also focused on other characteristics such as the prominence of muscle attachment reliefs on the long bones, the glabella, the mastoid process and the external occipital protuberance on skull fragments.

The next section contains the anthropological description of the cremated human remains recovered from the burials. I have chosen to describe the cremains separately for each grave because it is also an indication of the information that can be gleaned despite the poor preservation.

## Description of the human remains from the burials

*Grave 354: adult, 20–x-year-old individual*

The sex of the deceased could not be determined from the three coal black, meso-fragmented skull fragments. Regarding age at death, all that could be ascertained was that the remains came from an adult individual. Total weight: 4.8 g *(Pl. 3)*.

*Grave 358: ?*

The assemblage of *ca*. 50–60 poorly preserved cremains weighed 35.6 g (skull: 13.6 g, post-cranial skeleton: 22.0 g). Most of the burnt bone fragments were chalk white in colour, although a few metal-blue

[18] The human remains were taken back to the Balassa Bálint Museum in Esztergom after the assessment.
[19] Chochol 1961; Nemeskéri–Harsányi 1968; Pap et al. 2009; Ubelaker 2009.
[20] Schour–Massler 1941.
[21] Meindl–Lovejoy 1985.
[22] Perizonius 1981.
[23] Nemeskéri et al. 1960.

fragments also occurred among them. The sex or age at death of the deceased could not be determined owing to the poor preservation of the cremains.

*Grave 359: adult, 20–x-year-old individual*
The assemblage of 30 micro- and meso-fragmented cremains weighed 31.2 g. The cremains did not include skull fragments, only a few more closely unidentifiable long bone diaphyses. The bones were micro- and meso-fragmented, and had a chalk white colour. The age at death could not be determined; all that could be ascertained was that the cremains came from an adult individual.

*Grave 363: adult, 20–39-year-old individual*
The assemblage of *ca*. 100 micro- and meso-fragmented cremains weighed 138.5 g (skull: 20.4 g, post-cranial skeleton: 118.1 g). The fragments were burnt heterogeneously, and were chalk white and metal-blue in colour. Fragments of the maxilla, nasal, temporal and occipital bone could be identified of the skull, and the remains of the humerus, femur and tibia of the post-cranial skeleton. The assemblage was dominated by more closely unidentifiable long bone diaphyses. The age at death was estimated from the closure of the cranial sutures and the changes in the inner structure of the caput femoris.

*Grave 364: adult, 20–59-year-old female (?)*
The assemblage was made up of *ca*. 60–80 medium well preserved, meso-fragmented cremains. Total weight: 126.8 g (skull: 24.3 g, post-cranial skeleton: 102.5 g). The bone fragments were burnt to a chalk white colour, although a few calcined remains were metal-blue and black. Occipital and parietal fragments survived of the skull as well as a small fragment of the maxilla, while the diaphyses of the long bones (humerus, femur and tibia) could be securely identified of the post-cranial skeleton. Judging from the overall gracility of the bones, the prominence of the muscle attachment reliefs and the overall morphological traits, the deceased was a woman. The closure of the cranial sutures suggested that the deceased was an adult *(Pl. 7)*.

*Grave 382: adult, 20–x-year-old individual*
The assemblage of *ca*. 60–80 meso-fragmented cremains weighed 71.7 g (skull: 17.7 g, post-cranial skeleton: 54.0 g). All the bone fragments were chalk white and had an essentially gracile nature. However, all that could be ascertained was that the deceased was an adult *(Pl. 6)*.

*Grave 383: ?*
The assemblage of five micro- and meso-fragmented cremains weighed 4.3 g (skull: 1.3 g, post-cranial skeleton: 3.0 g). The fragments were burnt homogeneously, their colour was chalk white. Neither the sex, nor the age at death could be determined from the low amount of cremains.

*Grave 384: ?*
The assemblage of poorly preserved, nine micro- and meso-fragmented cremains was unsuitable for determining sex or age at death. Total weight: 3.8 g (skull: 2.3 g, post-cranial skeleton: 1.5 g). The bone fragments were burnt homogeneously, the fragments were chalk white in colour. A parietal fragment could be identified of the skull, while in the case of the post-cranial skeleton, the remains came from long bones.

*Grave 385: adult, 20–x-year-old female (?)*
The assemblage of *ca*. 60–70 predominantly meso-fragmented cremains weighed 83.9 g (skull: 11.8 g, post-cranial skeleton: 72.1 g). A temporal and occipital fragment of the skull and an arm bone fragment

of the post-cranial skeleton could be identified. The fragments were all burnt homogeneously, their colour was chalk white. Two fragments were identified as animal bones. In the lack of any indicators, the age at death could not be estimated more closely.

*Grave 387: ?*
A single skull fragment was recovered from this burial, which was unsuitable for sexing or for estimating the age at death. Weight: 0.4 g. Colour: chalk white.

*Grave 388: juvenis-adultus, 15–30-year-old individual*
The assemblage was made up of *ca*. 80–100 medium well preserved, meso-fragmented cremains. Total weight: 107.8 g (skull: 19.1 g, post-cranial skeleton: 88.7 g). The bone fragments were predominantly chalk white in colour, alongside a few metal-blue fragments. The skull was represented by parietal and occipital fragments as well as a pars pyramidea fragment of the temporal bone. A clavicle, a humerus, a femur and an ulna as well as the fragment of a vertebra could be identified of the post-cranial skeleton. The sex of the deceased could not be determined from the gracile remains, while age at death was estimated from the morphological and metric traits of the bone fragments. The assemblage included a burnt animal bone.

*Grave 390: adult, 20–x-year-old individual*
The assemblage was made up of *ca*. 40–50 predominantly meso-fragmented cremains. Total weight: 50.7 g (skull: 11.0 g, post-cranial skeleton: 39.7 g). The fragments were all chalk white in colour, only a single tibia fragment (perhaps not belonging to this individual) was metal-blue. All that could be ascertained was that the deceased was an adult.

*Grave 390a: infans I, 1–5-year-old child*
The assemblage of poorly preserved, *ca*. 40 micro-fragmented cremains weighed 11.7 g (skull: 2.8 g, post-cranial skeleton: 8.9 g). The bone fragments were homogeneously burnt and chalk white in colour. A few teeth, rib and humerus fragments could be identified among the remains. The sex or age at death of the deceased could not be determined.

*Grave 391: ?*
The assemblage was made up of 19 poorly preserved, micro- and meso-fragmented cremains, which were unsuitable for sexing. Total weight: 17.8 g (skull: 11.4 g, post-cranial skeleton: 6.4 g). The burnt bones were all chalk white in colour. Only an occipital fragment could be identified of the skull, and diaphyses from undeterminable long bones of the post-cranial skeleton. The sex or age at death of the deceased could not be established.

*Grave 392: adult, 20–x-year-old individual*
The assemblage was made up of 22 micro- and meso-fragmented cremains. Total weight: 29.1 g (skull: 4.9 g, post-cranial skeleton: 24.2 g). The calcined bone fragments were all chalk white in colour. Femur and tibia fragments could be identified among the fragments, which only indicated that they came from an adult individual.

*Grave 393: adult, 20–x-year-old individual*
The assemblage of nine poorly preserved, micro- and meso-fragmented cremains weighed 11 g (skull: 2.4 g, post-cranial skeleton: 8.6 g). The bone fragments were all chalk white in colour. Three parietal

fragments could be identified alongside the epiphyses of more closely unidentifiable long bones, which only indicated that the cremains came from an adult individual.

*Grave 394: ?*
The assemblage of *ca*. 50 poorly-preserved, micro- and meso-fragmented cremains weighed 25.1 g (skull: 2.8 g, post-cranial skeleton: 22.3 g). The bone fragments were burnt homogeneously and were chalk white in colour. Six more closely unidentifiable fragments of the skull survived alongside the diaphyses of indeterminable long bones. The indistinct fragments were unsuitable either for sexing or for estimating the age at death *(Pl. 5)*.

*Grave 395: ?*
A single chalk white, micro-fragmented bone fragment weighing 0.1 g was recovered from the burial. The fragment was unsuitable for sexing or for estimating the age at death.

*Grave 396: ?*
The assemblage was made up of 12 poorly preserved, micro- and meso-fragmented cremains. Total weight: 5.3 g (skull: 1.1 g, post-cranial skeleton: 4.2 g). The bone fragments were all chalk white in colour. They were unsuitable for sexing or for estimating the age at death owing to their poor preservation.

*Grave 398: adult, 20–x-year-old individual*
The assemblage of 32 poorly preserved, micro- and meso-fragmented cremains weighed 19.2 g (skull: 9.3 g, post-cranial skeleton: 9.9 g). Parietal fragments survived of the skull and diaphyses fragments of more closely unidentifiable long bones. The assemblage included a mussel (?) fragment. The calcined bone fragments were all burnt homogeneously and had a chalk white colour. The remains were unsuitable for sexing and all that could be ascertained was that the deceased was an adult *(Pl. 9)*.

*Grave 399: adult, 20–x-year-old individual*
The assemblage was made up of 40–60 medium well preserved meso-fragmented cremains. Total weight: 115.9 g (skull: 8.9 g, post-cranial skeleton: 107.0 g). The bones were burnt heterogeneously: the skull fragments had a metal-blue colour, while the post-cranial fragments were all chalk white. Very little survived of the skull, no more than seven fragments, most of which came from the parietal region. The fragments of the post-cranial skeleton comprised long bone epiphyses, among which femur and tibia fragments could be identified. The fragments were unsuitable for sexing and all that could be established, that the fragments belong to an adult individual.

*Grave 400: adult, 20–x-year-old individual*
The assemblage was made up of roughly 40 micro- and meso-fragmented cremains. Total weight: 30.6 g (skull: 3.9 g, post-cranial skeleton: 26.7 g). The fragments were all burnt homogeneously and had a chalk white colour. Sexing could not be performed owing to the fragments' poor state of preservation; the fragments were all gracile. In the lack of any indicators, the age at death estimate was based on the general metric and morphological traits of the remains.

*Grave 403: adult, 20–x-year-old individual*
The assemblage of 11 micro- and meso-fragmented cremains weighed 7.9 g (skull: 1.6 g, post-cranial skeleton: 6.3 g). The bone fragments were heterogeneously burnt: most were chalk white in colour, but a long bone and a skull fragment had a metal-blue hue. An occipital fragment survived of the skull,

while long bone diaphysis fragments could be identified of the post-cranial skeleton. All that could be ascertained was that the cremains came from an adult.

*Grave 404: ?*
The assemblage was made up of 15 meso-fragmented cremains, which were unsuitable for sexing or for estimating the age at death. Total weight: 16.7 g (skull: 5.2 g, post-cranial skeleton: 11.5 g). The bone fragments were all burnt homogeneously and had a chalky white colour. An occipital fragment could be identified of the skull, while diaphyses of more closely unidentifiable long bones remained of the post-cranial skeleton. There was a mussel (?) fragment among the bone fragments.

*Grave 408: adultus-maturus, 20–59-year-old female*
The assemblage was made up of *ca*. 40 medium well preserved, meso-fragmented cremains. Total weight: 64.6 g (skull: 2.2 g, post-cranial skeleton: 62.4 g). The bone fragments were burnt heterogeneously and most fragments had a chalk white colour, only a few had a metal hue. An occipital fragment and the left cheek bone could be identified of the skull and diaphyses fragments of the humerus, femur and tibia of the post-cranial skeleton. Sexing was based on the morphological traits of the occipital and the cheek bones as well as the less prominent linea aspera on the femur. In the lack of any indicators, age at death could be estimated within broad boundaries only.

*Grave 409: adultus-maturus, 20–59-year-old male*
The assemblage was made up of *ca*. 150 medium well preserved, meso-fragmented cremains. Total weight: 262.0 g (skull: 32.5 g, post-cranial skeleton: 229.5 g). The fragments were burnt to a more or less uniform chalk white colour, a bluish hue could only be noted on two occipital fragments. Occipital and parietal fragments as well as the root of an upper premolar survived of the skull, while long bone diaphyses (humerus, radius, femur and tibia) and a clavicle fragment of the post-cranial skeleton. Sexing was based on the general thickness and robustness as well as the prominence of the muscle attachment relief of the occipital fragment. In the lack of any indicators, the age at death is no more than a broad estimate. A burnt animal bone was found among the human remains: it was a rib, metal-blue in colour, that perhaps came from a small ruminant.

*Grave 409a, "a small bowl … covered the calcined bones": infans I, 0–2-year-old child*
The assemblage was made up of *ca*. 30–40 micro- and meso-fragmented cremains. Total weight: 20.7 g (skull: 19.4 g, post-cranial skeleton: 1.3 g). The bone fragments were all yellowish-white in colour. Almost only skull fragments were preserved, alongside a few more closely unidentifiable long bone fragments of the post-cranial skeleton. The age at death estimation was based on the general metric traits and the small absolute size of the bone fragments.

*Grave 410: adultus-maturus, 25–45-year-old male (?)*
The assemblage was made up of *ca*. 200–250 medium well preserved, meso-fragmented cremains. Total weight: 367.7 g (skull: 52.6 g, post-cranial skeleton: 315.1 g). The bone fragments were burnt heterogeneously. The cremains were predominantly chalk white in colour, alongside a few metal-blue coloured skull and post-cranial skeletal fragments. Frontal, occipital and mandible fragments could be identified of the skull, and long bone diaphysis fragments as well as fragments of a cervical vertebra (a scapula and a talus) and a phalanx could be identified of the post-cranial skeleton. Sexing was based on the prominence of the muscle attachment reliefs, while age at death was estimated from the internal changes in the caput of the femur *(Pl. 11)*.

*Grave 411: ?*
The assemblage of ten fragments weighed 6.5 g (skull: 1.8 g, post-cranial skeleton: 4.7 g). All the bone fragments were chalk white in colour. The fragments comprised four more closely unidentifiable skull fragments and unidentifiable long bone pieces. The few calcined bones were insufficient for sexing or for estimating age at death.

*Grave 412: adult, 20–x-year-old individual*
The assemblage was made up of 13 micro- and meso-fragmented cremains weighing 14.6 g (skull: 5.0 g, post-cranial skeleton: 9.6 g). The bone remains were all chalk white in colour. In addition to four parietal fragments of the skull, only a tibia diaphysis fragment of the post-cranial skeleton could be identified. All that could be ascertained from the cremains was that the deceased had been an adult.

*Grave 414: adult, 20–x-year-old individual*
The assemblage was made up of *ca*. 30–40 micro- and meso-fragmented cremains. Total weight: 32.5 g (skull: 0.6 g, post-cranial skeleton: 31.9 g). The fragments were all burnt to a chalk white colour, although one or two fragments had a metal-blue hue on their inner side. A single fragment (perhaps from the parietal bone) survived of the skull, while the humerus and femur diaphyses could be identified of the post-cranial skeleton. The few indistinct bone fragments were unsuitable for sexing. The age at death was estimated from the general metric traits of the calcined bones. The assemblage included the fragments of three mussels or snails *(Pl. 10)*.

*Grave 416: adult, 20–x-year-old individual*
The assemblage of 6 micro- and meso-fragmented bone fragments weighed 9.6 g (skull: 8.2 g, post-cranial skeleton: 1.4 g). The bone fragments were burnt heterogeneously, with some fragments having a chalk white colour and others being metal-blue. All that could be ascertained from the absolute sizes and morphology of the bone fragments was that they came from an adult individual.

*Grave 417: ?*
One single unburnt bone fragment, a diaphysis fragment of a more closely unidentifiable long bone was recovered from this burial, which was unsuitable for sexing or for estimating the age at death.

*Grave 418: adult, 20–x-year-old individual*
The assemblage was made up of *ca*. 25 poorly preserved, micro- and meso-fragmented cremains. Total weight: 15.1 g. Humerus and femur bone fragments could be identified among the remains. There were no skull fragments among them. The fragments were burnt heterogeneously and were chalk white and metal-blue in colour. The assemblage also included unburnt long bone fragments. Owing to the poor preservation of the cremains, only the age at death could be estimated.

*Grave 420: adult, 20–39 year-old female (?)*
The assemblage was made up of *ca*. 60–70 medium well preserved, meso-fragmented cremains. Total weight: 106.3 g (skull: 31.7 g, post-cranial skeleton: 74.6 g). The bone fragments were burnt heterogeneously and were predominantly chalk white in colour, but also included a few with a grey and metal-blue hue. Frontal, parietal, temporal and occipital fragments could be identified of the skull, while humerus, femur and tibia fragments of the post-cranial skeleton. The sexing of the deceased was based on the arcus superciliaris on the frontal fragment and the weak prominence of the muscle attachment

reliefs on the long bone fragments. The age at death estimate was based on the closure of the cranial sutures.

*Grave 422: ?*
The assemblage of *ca*. 50 poorly preserved, micro- and meso-fragmented cremains weighed 53.0 g (skull: 4.0 g, post-cranial skeleton: 44.7 g). The bones were burnt homogeneously and had a chalk white colour. Only two tibia fragments could be identified among the remains. The sex or age at death of the deceased could not be determined.

*Grave 423: ?*
The assemblage was made up of 12 poorly preserved, micro- and meso-fragmented cremains weighing 9.3 g (skull: 0.5 g, post-cranial skeleton: 8.7 g). The bone fragments were homogeneously burnt and chalk white in colour. A single fragment of the skull was preserved, while diaphyses of more closely unidentifiable long bones of the post-cranial skeleton. The few calcined bone fragments were unsuitable for sexing or for estimating the age at death.

*Grave 425: ?*
The assemblage was made up of two skull fragments and a long bone fragment, which were unsuitable for sexing or for estimating the age at death. Total weight: 1.8 g (skull: 1.1 g, post-cranial skeleton: 0.7 g). The bone fragments had a chalk white colour.

*Grave 426, vessel 1: ?*
The two surviving hyper-micro-fragmented burnt bone splinters weighing 0.1 g were chalk white and metal-blue in colour. They were unsuitable for sexing or for estimating age at death. Fragments of a snail were also identified among the remains.

*Grave 429: ?*
The assemblage was made up of three micro-fragmented cremains weighing 1.2 g. They were burnt to a chalk white colour. The sex or age at death of the deceased could not be determined.

*Grave 434: adult, 20–x-year-old individual*
The assemblage was made up of *ca*. 40–50 poorly preserved, meso-fragmented cremains. Total weight: 46.5 g. The calcined bone fragments were predominantly chalk white in colour, but included also a metal-blue femur fragment. There were no skull fragments, only long bone diaphyses could be identified among the remains. All that could be ascertained regarding age at death was that the remains came from an adult individual.

*Grave 435: adultus-maturus, 20–59-year-old male*
The assemblage was made up of *ca*. 200 medium well preserved, micro- and meso-fragmented cremains. Total weight: 160.9 g (skull: 63.1 g, post-cranial skeleton: 97.8 g). The bone fragments were heterogeneously burnt and were predominantly chalk white in colour, although metal-blue fragments could be found among both the skull and the post-cranial skeletal remains. Occipital, temporal and zygomatic fragments could be identified of the skull, while humerus, femur and tibia fragments of the post-cranial skeleton. Sexing was based on the absolute thickness of the occipital fragment and the general robustness of the long bone fragments. The age at death estimation was based on the closure of the cranial sutures. A worked bone tool (?) was identified among the calcined bone fragments *(Pl. 13)*.

*Grave 441: ?*
The assemblage of 12 micro- and meso-fragmented cremains weighed 1.5 g. The burnt bone fragments were all chalk white in colour. The calcined bone fragments did not include any parts of the skull. The bad preservation was unsuitable for sexing or for estimating the age at death of the deceased.

*Grave 442: ?*
The assemblage was made up of six poorly preserved, micro- and meso-fragmented cremains. Total weight: 1.9 g. No skull fragments could be identified among the cremains. The calcined bones were all chalk white in colour. The cremains were unsuitable for sexing or for estimating the age at death. The assemblage included a lump of ochre and an unburnt animal tooth.

*Grave 443: adultus-maturus, 20–59-year-old individual*
The assemblage of *ca*. 60–80 meso-fragmented cremains weighed 75.4 g (skull: 19.8 g, post-cranial skeleton: 46.6 g). The bone fragments were burnt homogeneously and were chalk white in colour. A parietal and a temporal fragment as well as the root of a probably right upper canine survived of the skull, while humerus and femur fragments of the post-cranial skeleton could be identified. The indistinct fragments were unsuitable for sexing, but an estimate of the age at death could be given. An artificial perforation (diam. *ca*. 2 mm) can be seen on the neck of the canine whose crown is missing *(Pl. 12)*.

*Grave 446: ?*
The two bone fragments recovered from this burial weighed M. 0.9 g, both were homogeneously burnt and chalk white in colour. One was a diaphysis fragment of a more closely unidentifiable long bone, but the other piece could not be identified. The two fragments were unsuitable for sexing or for estimating the age at death *(Pl. 4)*.

*Grave 450: ?*
The assemblage of 22 poorly preserved, micro- and meso-fragmented cremains weighed 26.3 g (skull: 17.7 g, post-cranial skeleton: 8.6 g). The calcined bone fragments were homogeneously burnt and chalk white in colour. The indistinct and more closely unidentifiable bone fragments were unsuitable for sexing or for estimating the age at death.

*Grave 451: adultus-maturus (20–59-year-old), male (?)*
The assemblage was made up of *ca*. 50 medium well preserved, micro- and meso-fragmented cremains. Total weight: 60.9 g (skull: 12.7 g, post-cranial skeleton: 48.2 g). The bone fragments were homogeneously burnt and chalk white in colour. Only parietal fragments survived of the skull, while femur, tibia and fibula fragments could be identified of the post-cranial skeleton. The muscle attachment reliefs on the femur suggested that the deceased was a male. In the lack of any indicators, age at death could only be estimated within broad limits *(Pl. 14)*.

*Grave 453: adult, 20–x-year-old individual*
All that could be ascertained from the assemblage of *ca*. 25 poorly preserved, meso-fragmented cremains was that they came from an adult individual. Total weight: 49.0 g (skull: 9.5 g, post-cranial skeleton: 39.5 g). Most of the burnt bone fragments were chalk white in colour, but one of the skull fragments had a metal-blue hue. Parietal fragments could be identified of the skull, while radius and femur fragments of the post-cranial skeleton. The age at death estimation was based on the general metric traits *(Pl. 8)*.

*Grave 454: adult, 20–x-year-old individual*
The assemblage of *ca*. 50 micro- and meso-fragmented cremains weighed 45.9 g (skull: 13.9 g, post-cranial skeleton: 32 g). An occipital fragment of the skull and a femur and a vertebra fragment of the post-cranial skeleton could be identified. The burnt bone fragments were all chalk white in colour. All that could be ascertained was that deceased had been an adult individual.

## Assessment of the anthropological study

I examined the burnt cremains of fifty individuals from a total of fifty burials. The assemblages of calcined bones recovered from the burials varied regarding their fragmentation and state of preservation – unfortunately, most of the fragments did not enable an age and sex determination, which considerably constrained the analysis. *Table 2* shows the individual data of each burial, while *Table 3* presents the distribution of the buried individuals according to age and sex.

Owing to the relatively small and generally poorly preserved assemblages, the age at death could only be estimated within broad time limits, which is unsuitable for a detailed demographic analysis. The low proportion of children (4%) suggests that they were perhaps not regarded as full members of the community and were buried elsewhere, although it is also possible that the lack of child remains can be explained by the poor preservation of the cremains, which in many cases made sexing and age estimation virtually impossible. Also, we have no way of knowing the age of the individuals represented by assemblages weighing a few grams only that were lost or misplaced since the excavation. The distribution of the deceased cremated in adulthood indicate that the burials are dominated by adultus and maturus aged individuals. None of the remains could be confidently assigned to the young, juvenis age group (15–20 years) or the old, senilis age group (60–79 years). Moreover, only four males and four females could be sexed among the remains assigned to the adult age group.

Most burials contained the remains of a single individual, only in one case did a grave contain a double burial (Grave 409), which yielded the cremains of an adult male deposited in a bowl and the cremains of a child strewn on the ground and covered with another bowl. In this case, it is possible that the two were related (perhaps father and child) and had been buried in the same grave after having died at roughly the same time. However, this cannot be confirmed using traditional anthropological methods.

Burnt animal bones were recovered from two burials (Graves 388 and 409), while an unburnt bone from one burial (Grave 442). Mussel or snails fragments could be identified among the cremains from four burials (Graves 398, 404, 414, 426; *Pl. 10*), and one burial yielded a worked bone tool (Grave 435). The burnt animal bones may represent the remains of the food offering placed on the pyre together with the deceased or they may be remains of the deceased's pet animal. The presence of the unburnt bone and the worked bone tool among the cremains was probably accidental and unintentional, or they might represent offerings or a tool used by the deceased that had been deposited in the grave after the cremation.[24]

A distribution according to anatomical position reveals that although fragments of both the skull and the post-cranial skeleton were preserved in most cases, their proportion is hardly adequate. In addition to the typical neurocranium fragments, there is a conspicuous lack of the fragile viscerocranium and of teeth, which are most resistant to heat. The post-cranial skeletal remains are almost exclusively made up of long bone fragments, while other parts such as ribs, vertebrae, pelvic bones and scapulas were only recovered from a few burials. This is perhaps a reflection of the practice that the remains of the cremated individual were not collected "systematically" and that not all were gathered. However, it is also possible that even if all the cremains were gathered after cremation, only a smaller or symbolic portion was deposited in the grave during the funeral ceremony.

[24] The animal bones were examined and assessed by Erika Gál. See pp. 367–379, in this volume.

The latter possibility is also supported by the weight of the cremains. The weight of the human remains from Pilismarót ranged between 0.1 g and 367.7 g, with the average being less than 18 g, which is well below what could be expected and the much larger average weight of prehistoric cremains from other prehistoric cremation burials. The assemblages from Pilismarót are small, especially if we take into consideration that the cremation of an adult in a modern incinerator yields an average of 1–4 kg of cremains.[25] The values well below the average confirm the earlier assumption (based on the surviving anatomical parts of the body) that not all the remains were collected from the pyre after cremation. However, it must also be borne in mind that the low amounts could also be influenced by taphonomic processes, by the lifting, the cleaning and the storage of the cremains during and after the excavation.

The calcined bone fragments from Pilismarót were between 1 and 5 cm large, meaning that the cremains were dominated by micro- and meso-fragmented remains. The cremains of the two infans I aged children were micro- and hyper-micro-fragmented, with 1 cm large or smaller fragments. This corresponds to the fragmentation pattern noted on other sites.

Curved, transversal cracks and irregular longitudinal fissures were visible on the bone fragments, suggesting that the bodies were still fleshed when they were placed on the pyre and that the bodies were probably cremated shortly after death. Owing to the small size of the bone fragments, the extent of the deformation and possible warping could not be studied.

The calcined bone fragments were predominantly chalk white in colour, indicating almost complete cremation. In most cases, the bones were burnt homogeneously *(Pls 3, 5, 9)*, but metal-blue and black bone fragments also occurred in the assemblages *(Pls 4, 6–8, 10, 11–14)*. The latter are an indication of incomplete or poor cremation at a lower temperature. However, the presence of heterogeneously burnt bone fragments in the same assemblage is rather a reflection of the body's position on the pyre: if some parts of the body are exposed to less heat, the bones are not burnt to a chalk white colour.

No pathological alterations could be observed on the bone fragments and neither were there any charcoal remains in the assemblages recovered from the burials.

## Conclusion

Described and discussed in the above were the findings of the anthropological analysis of the cremated remains of fifty individuals of the Late Copper Age Boleráz group uncovered in the Pilismarót-Basaharc cemetery.

The proportion of the age at death of the assemblages suitable for analysis was as follows: two infans I children (1–7 years), one juvenis-adultus (15–39 years), 9 adultus and maturus (20–59 years) and 18 adults (20-x years), while the age at death could not be determined in the case of 20 individuals. According to sex, only four males and four females could be identified among the adults. In the case of sixteen burials, neither sexing nor the estimation of age at death was possible owing to the poor preservation of the cremains. Most of the deceased died in adulthood (adultus-maturus age group). The Pilismarót series is unsuitable for a detailed demographic analysis owing to the poor preservation of the cremains and the small size of the sample.

The assemblages from the analysed burials were made up of few calcined bone fragments, which yielded little information. The burials included cranial fragments to a smaller extent and a larger proportion of post-cranial skeletal elements, of which the long bones were generally deposited in the graves. Several explanations can be offered for this phenomenon: it is possible that only a symbolic portion of the cremated remains of the deceased were placed in the grave (perhaps based on a deliberate selection) during the funeral ceremony, but it is equally possible that the amount of the surviving

[25] McKinley–Roberts 1993; Warren-Maples 1997; Ubelaker 2009.

cremains was also affected by erosion and chemical processes in the soil as well as by their treatment during excavation and the post-excavation handling and storage of the remains.

The fragmentation, colour, warping, deformation, cracking and fissures of the bone fragments indicate that cremation was performed at an uneven, but nonetheless high temperature. Most fragments had a homogeneous chalk white colour. In addition to the chalk white fragments, there were coal black and metal-blue fragments too. However, no apparent pattern could be observed. In some cases, the metal-blue/black coloured fragments of the axial skeleton such as the vertebrae, the pelvic bone and, in one case, the skull bone pieces may indicate that the body was not uniformly affected by the fire. For example, the cremation of the pelvic region can be less complete, perhaps as a result of the greater protection afforded by the higher water content of the abdominal organs. In cases when the skull or certain long bone fragments had a greyish-blue or black colour, we may assume that these skeletal elements had not lain in the pyre's central part.

Unfortunately, the anthropological make-up of the period's population remains little known owing to the cremation rite. This study is therefore rather a methodological contribution to a better understanding of individuals buried according to the cremation rite.

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*Table 1. Assessed anthropological samples from sites of the proto-Boleráz and Boleráz group and of the Baden culture*

| Site | Period | Child | Male | Female | ? | Total | Literature |
|---|---|---|---|---|---|---|---|
| 1. Abony-Turjányos dűlő | proto-Boleráz | 24 | 10 | 13 | 1 | 48 | Köhler et al. 2009a, 2009b |
| 2. Alsónémedi | Baden | 14 | 16 | 8 | 6 | 44 | Nemeskéri 1951a, 1951b |
| 3. Baja, Dózsa Gy. u. 233. | Baden | – | 1 | – | – | 1 | Farkas 1975 |
| 4. Balatonkeresztúr-Réti dűlő | Baden | – | 7 | 6 | 3 | 16 | Köhler, unpublished |
| 5. Balatonlelle-Felsőgamász | Boleráz+Baden | 4 | 11 | 6 | – | 21 | K. Zoffmann 2006 |
| 6. Balatonlelle-Országúti dűlő | Boleráz+Baden | 2 | – | 2 | – | 4 | K. Zoffmann, unpublished |
| 7. Balatonmagyaród-Hídvégpuszta-Déli rév | Baden | 1 | 1 | 3 | – | 5 | Pap, cit. Bondár 1987 |
| 8. Balatonszemes-Szemesi berek | Baden | 1 | 1 | – | – | 2 | K. Zoffmann, unpublished |
| 9. Balatonőszöd-Temetői dűlő | Boleráz+Baden | 21 | 8 | 14 | 2 | 45 | K. Zoffmann 2004, Köhler 2012, 2014 |
| 10. Budakalász-Luppa csárda | Baden | 142 | 89 | 127 | 50 | 408 | Nemeskéri 1956, Köhler 2009 |
| 11. Budapest-Andor utca | Baden | – | 1 | – | – | 1 | Nemeskéri 1956 |
| 12. Budapest-Békásmegyer | Baden | 2 | – | – | – | 2 | Korek 1951 |
| 13. Budapest-Káposztásmegyer | Baden | – | 1 | 1 | – | 2 | K. Zoffmann 1987–1988 |
| 14. Kamenin-Kiskukoricás | Baden | 1 | – | 1 | – | 2 | Jakab 1980 |
| 15. Kaposújlak-Várdomb, Road 61, Site 29 | Baden | 9 | 6 | 5 | 1 | 21 | K. Zoffmann, unpublished |
| 16. Kaposvár, Road 61 bypass | Baden | – | – | 1 | – | 1 | K. Zoffmann, unpublished |
| 17. Leobersdorf | Baden | 3 | 1 | 1 | – | 5 | Teschler-Nicola–Schultz 1984 |
| 18. Lichtenwörth | Baden | 3 | 6 | 2 | 2 | 13 | Teschler-Nicola–Schultz 1984 |
| 19. Malá nad Hronom | Boleráz | 2 | – | 1 | 1 | 4 | Nevizánsky et al. 1995–1996 |
| 20. Moravičany | Boleráz | – | – | 1 | – | 1 | Stloukal–Furmánek 1982 |
| 21. Mužla-Cenkov-Vilmakert | Baden | – | – | 1 | – | 1 | Vondráková 1985 |
| 22. Nitriansky Hrádok | Baden | 2 | 5 | 5 | – | 12 | Vlček 1953 |
| 23. Ordacsehi-Bugaszeg M7/S-29 | Baden | 1 | – | 1 | – | 2 | K. Zoffmann, unpublished |
| 24. Orosháza-Vöröscsillag TSZ | Baden | 1 | – | – | – | 1 | Farkas 1975 |
| 25. Ózd-Center | Baden | 4 | 1 | 1 | – | 6 | Nemeskéri, cit. Kalicz 1963 |
| 26. Palotabozsok | Baden | – | – | 1 | – | 1 | Nemeskéri 1956 |
| 27. Pécs-Hőerőmű | Baden | 2 | 4 | 3 | – | 9 | K. Zoffmann1999 |
| 28. Pécs-Vasas-Homokbánya | Baden | – | – | 1 | – | 1 | K. Zoffmann, unpublished |
| 29. Pilismarót-Basaharc | Boleráz | 2 | 4 | 4 | 40 | 50 | Köhler, present study |
| 30. Sárvár, Bypass, Site 5 | Baden | – | 1 | – | – | 1 | Tóth, unpublished |
| 31. Sitzenberg | Baden | – | 1 | 1 | – | 2 | Neugebauer-Maresch–Teschler-Nicola 1986 |
| 32. Szentes-Nagyhegy | Baden | – | 3 | 1 | – | 4 | Nemeskéri 1956 |
| 33. Vác, Liliom u. 17. | Baden | – | – | – | 1 | 1 | K. Zoffmann, unpublished |
| 34. Vámosgyörk-Motorhajtóanyag-tároló | Baden | 7 | 4 | 9 | – | 20 | Marcsik, cit. Farkas 2004 |
| 35. Veszprém, Jutasi út | Baden | 2 | – | 1 | 1 | 4 | Köhler, unpublished |
| 36. Vörs, Majorsági épületek | Baden | – | – | 1 | – | 1 | Köhler 2015 |
| 37. Wolfersdorf | Baden | – | 2 | – | 1 | 3 | Ruttkay–Teschler-Nicola 1984 |
| 38. Wagram an der Traisen | Baden | 1 | 1 | – | – | 2 | Ruttkay–Teschler-Nicola 1984 |
| 39. Zillingtal | Boleráz | – | 1 | – | – | 1 | Kritscher 1985 |
| **Total** | | **251** | **186** | **222** | **109** | **768** | |

*Table 2. Pilismarót-Basaharc. Individual data of the burials*

| Grave | Sex | Age (years) | Weight (grams) | Number of fragments | Degree of fragmentation | Colour |
|---|---|---|---|---|---|---|
| 354 | ? | 20–x | 4.8 | = 3 | meso-fragmented | black |
| 358 | ? | ? | 35.6 | ≈ 50–60 | micro-, meso-fragmented | chalk white |
| 359 | ? | 20–x | 31.2 | ≈ 30 | micro-, meso-fragmented | chalk white |
| 363 | ? | 20–39 | 138.5 | ≈ 80–100 | micro-, meso-fragmented | chalk white, metal-blue |
| 364 | female? | 20–59 | 126.8 | ≈ 60–80 | meso-fragmented | chalk white |
| 382 | ? | 20–x | 71.7 | ≈ 60–80 | meso-fragmented | chalk white |
| 383 | ? | ? | 4.3 | = 5 | micro-, meso-fragmented | chalk white |
| 384 | ? | ? | 3.8 | = 9 | meso-fragmented | chalk white |
| 385 | female? | 20–x | 83.9 | ≈ 60–70 | meso-fragmented | chalk white |
| 387 | ? | ? | 0.4 | = 1 | micro-fragmented | chalk white |
| 388 | ? | 15–30 | 107.8 | ≈ 80–100 | meso-fragmented | chalk white |
| 390 | ? | 20–x | 50.7 | ≈ 40–50 | meso-fragmented | chalk white |
| 390a | child | 1–5 | 11.7 | ≈ 40 | micro-, meso-fragmented | chalk white |
| 391 | ? | ? | 17.8 | = 19 | micro-, meso-fragmented | chalk white |
| 392 | ? | 20–x | 29.1 | = 22 | micro-, meso-fragmented | chalk white |
| 393 | ? | 20–x | 11.0 | = 9 | meso-fragmented | chalk white |
| 394 | ? | ? | 25.1 | ≈ 50 | micro-, meso-fragmented | chalk white |
| 395 | ? | ? | 0,1 | = 1 | micro-fragmented | chalk white |
| 396 | ? | ? | 5.3 | = 12 | micro-, meso-fragmented | chalk white |
| 398 | ? | 20–x | 19.2 | = 32 | micro-, meso-fragmented | chalk white |
| 399 | ? | 20–x | 115.9 | ≈ 40–60 | meso-fragmented | chalk white |
| 400 | ? | 20–x | 30.6 | ≈ 40 | mesofragmenált | chalk white |
| 403 | ? | 20–x | 7.9 | = 11 | meso-fragmented | chalk white |
| 404 | ? | ? | 16.7 | = 14 | meso-fragmented | chalk white |
| 408 | female ? | 20–59 | 64.6 | ≈ 40 | meso-fragmented | chalk white |
| 409 | male | 20–59 | 262.0 | ≈ 150 | meso-fragmented | chalk white,metal-blue |
| 409a | child | 0–2 | 20.7 | ≈ 30–40 | meso-fragmented | chalk white |
| 410 | male ? | 25–45 | 367.7 | ≈ 200–250 | meso-fragmented | chalk white, metal-blue |
| 411 | ? | ? | 6.5 | = 10 | micro-fragmented | chalk white |
| 412 | ? | 20–x | 14.6 | = 13 | micro-, meso-fragmented | chalk white |
| 414 | ? | 20–x | 32.5 | ≈ 30–40 | meso-fragmented | chalk white |
| 416 | ? | 20–x | 9.6 | = 6 | micro-, meso-fragmented | chalk white, metal-blue |
| 417 | ? | ? | 1.2 | = 1 | meso-fragmented | light tan |
| 418 | ? | 20–x | 15.1 | ≈ 25 | micro-, meso-fragmented | chalk white, metal-blue |
| 420 | female ? | 20–39 | 106.3 | ≈ 60–70 | meso-fragmented | chalk white |
| 422 | ? | ? | 53.0 | ≈ 50 | micro-, meso-fragmented | chalk white |
| 423 | ? | ? | 9.3 | = 12 | micro-, meso-fragmented | chalk white |
| 425 | ? | ? | 1.8 | =3 | micro-fragmented | chalk white |
| 426 | ? | ? | 0.1 | = 2 | hyper-micro-fragmented | chalk white |
| 429 | ? | ? | 1.2 | = 3 | micro-fragmented | chalk white |
| 434 | ? | 20–x | 46.5 | ≈ 40–50 | meso-fragmented | chalk white |
| 435 | male | 20–59 | 161.7 | ≈ 200 | meso-fragmented | chalk white, metal-blue |
| 441 | ? | ? | 1.5 | = 12 | hyper-rmicro-, micro-fragmented | chalk white |
| 442 | ? | ? | 1.9 | = 5 | micro-, meso-fragmented | chalk white |
| 443 | ? | 20–59 | 75.4 | ≈ 60–80 | meso-fragmented | chalk white |
| 446 | ? | ? | 0.9 | = 2 | micro-, meso-fragmented | chalk white |
| 450 | ? | ? | 26.3 | = 22 | micro-, meso-fragmented | chalk white |
| 451 | male ? | 20–59 | 60.9 | ≈ 50 | micro-fragmented | chalk white |
| 453 | ? | 20–x | 49.0 | ≈ 25 | meso-fragmented | chalk white, metal-blue |
| 454 | ? | 20–x | 45.9 | ≈ 50 | micro-, meso-fragmented | chalk white |

*Table 3. Pilismarót-Basaharc. Breakdown according to sex and age*

| **Age groups** | **?** | **Male** | **Female** | **Total** | |
|---|---|---|---|---|---|
| | | | | | |
| Infans I–II (0–14 years) | 2 | 0 | 0 | 2 | 4% |
| Juvenis-Adultus (15–39 years) | 1 | 0 | 0 | 1 | 2% |
| Adultus (20–39 years) | 1 | 0 | 1 | 2 | 4% |
| Adultus-Maturus (20–59 years) | 1 | 4 | 2 | 7 | 14% |
| Maturus (40–59 years) | 0 | 0 | 0 | 0 | 0 |
| Senilis (60–79 years) | 0 | 0 | 0 | 0 | 0 |
| Adult (20–x years) | 17 | 0 | 1 | 18 | 36% |
| ? | 20 | 0 | 0 | 20 | 40% |
| **Total** | **42 (84%)** | **4 (8%)** | **4 (8%)** | **50** | **100%** |

*Plate 1. In a modern crematorium. the ashes are placed in a metal box after the body has been cremated (Csömör Cemetery and Crematorium, author's photo)*

*Plate 2. The bone fragments are pulverised into roughly 4 mm$^3$ large fragments after cremation because otherwise the remains would not fit into an urn (Csömör Cemetery and Crematorium, author's photo)*

*Plate 3. In the case of Grave 354, only three black coloured skull fragments remained for study (author's photo)*

*Plate 4. In the case of Grave 446, only two chalk white cremain fragments remained for study (author's photo)*

*Plate 5. Grave 394. Arrangement of the bone fragments according to anatomical position (author's photo)*

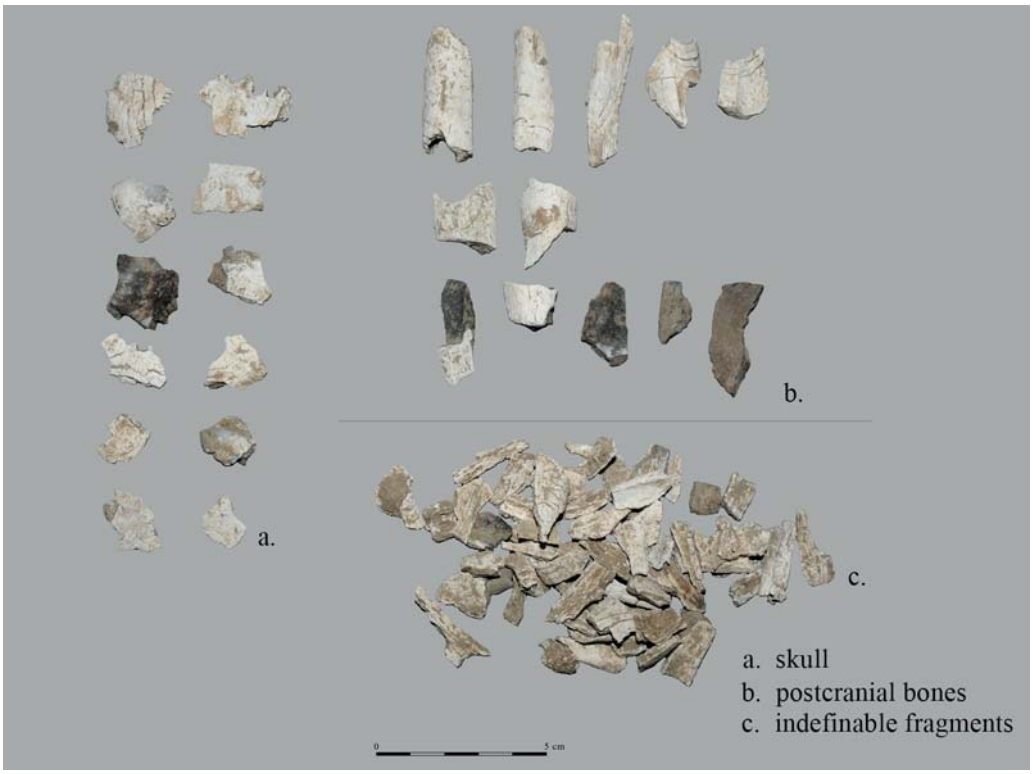


*Plate 6. Grave 382. Arrangement of the bone fragments according to anatomical position (author's photo)*

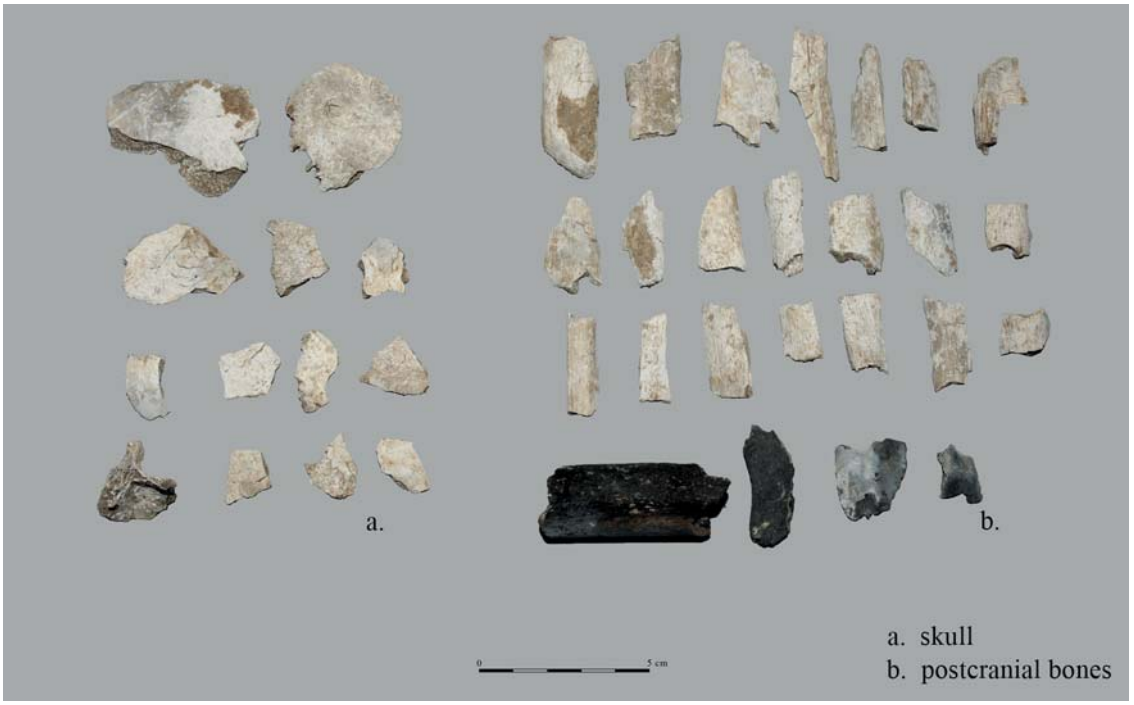


*Plate 7. Grave 364. Arrangement of the bone fragments according to anatomical position. Some long bone dyaphyseal parts were burnt black (author's photo)*

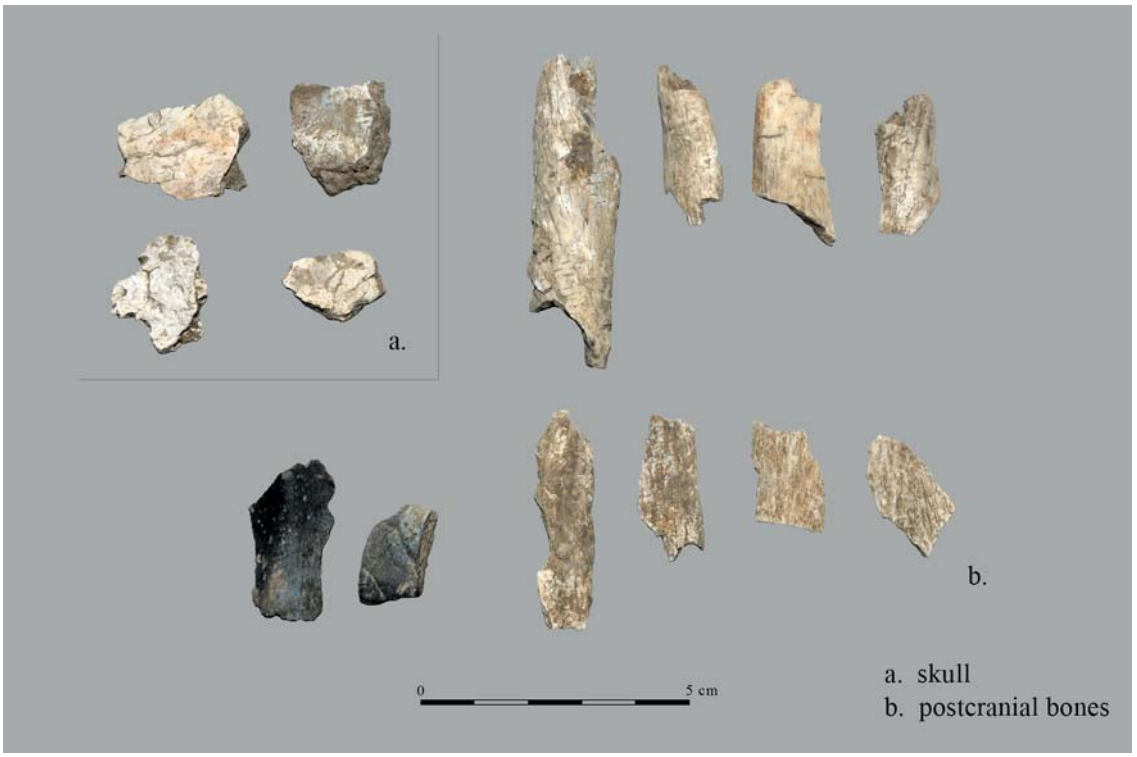


*Plate 8. Grave 453. The diaphyseal parts of two long bones and skull fragments burnt to a metal-blue and greyish-blue colour (author's photo)*

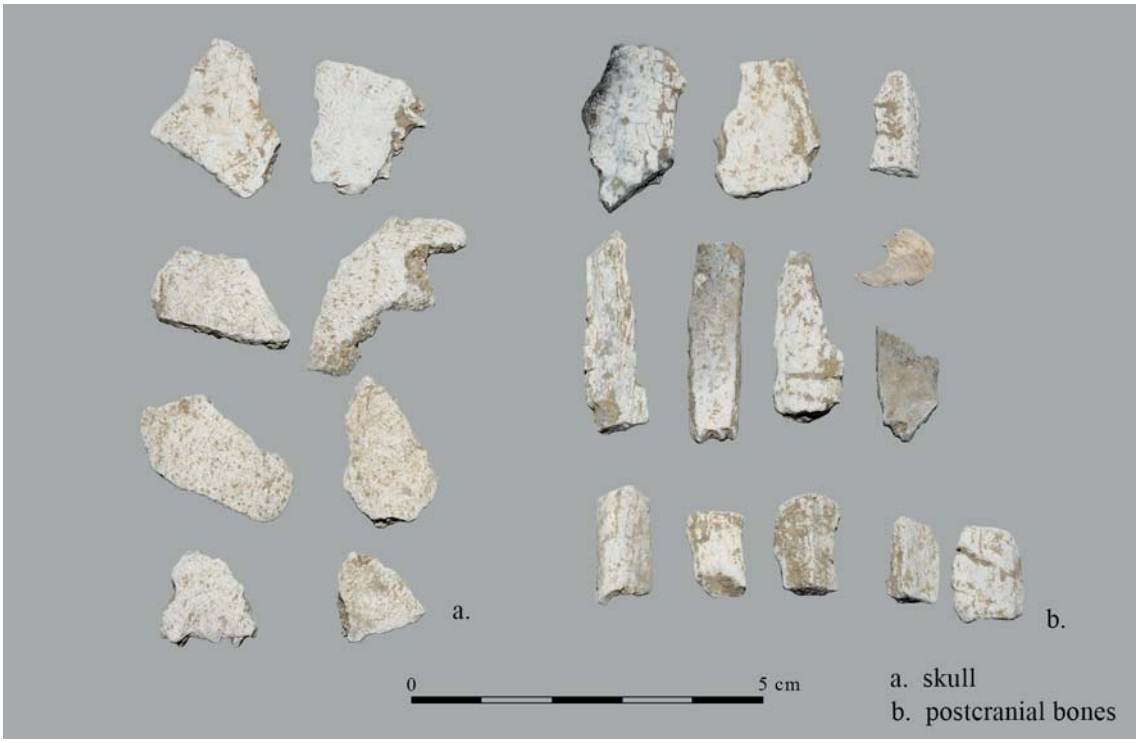


*Plate 9. Grave 398. Arrangement of the bone fragments according to anatomical position. Relatively homogeneously burnt bone fragments (author's photo)*

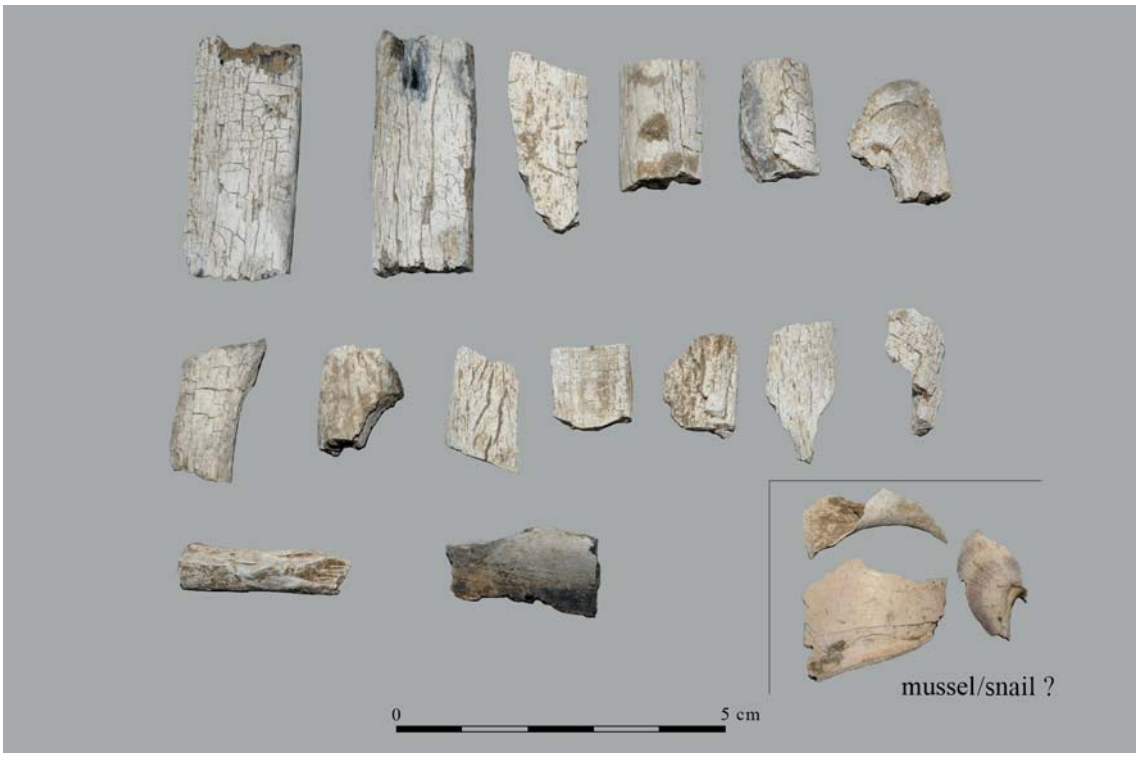


*Plate 10. Grave 414. The cremains mainly consist of long bone parts and three fragments of mussels or snails (author's photo)*

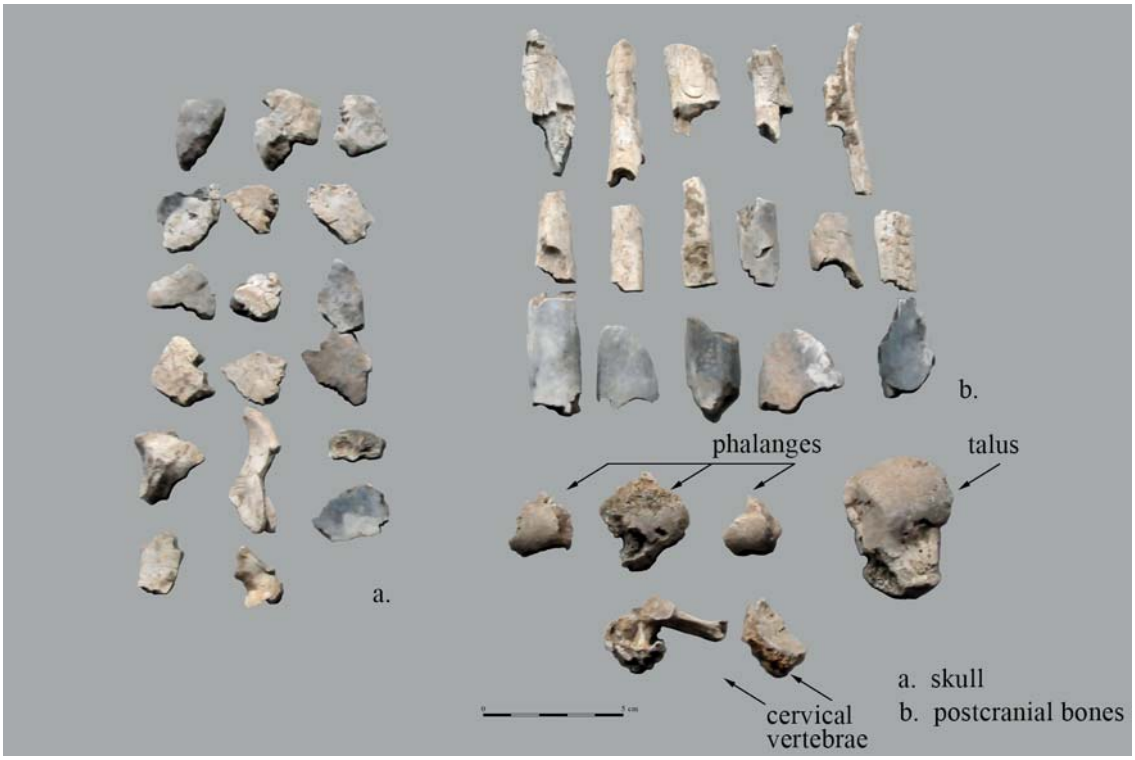


*Plate 11. Grave 410. Arrangement of the bone fragments according to anatomical position (author's photo)*

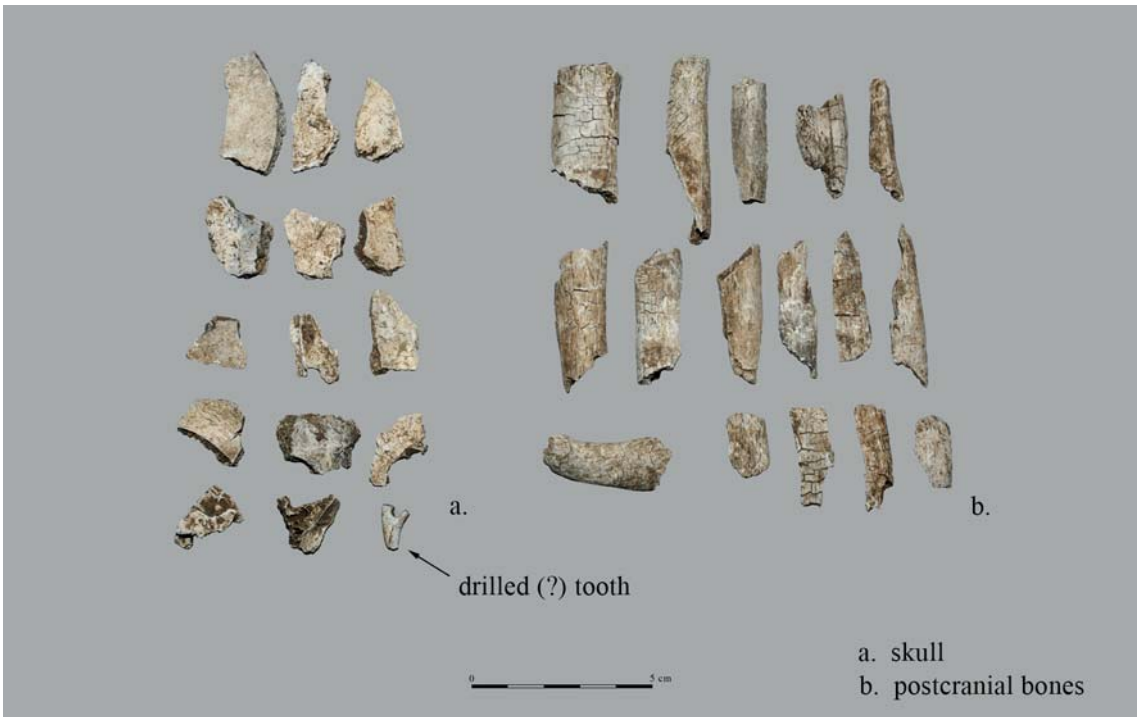


*Plate 12. Grave 443. Arrangement of the bone fragments according to anatomical position (author's photo)*

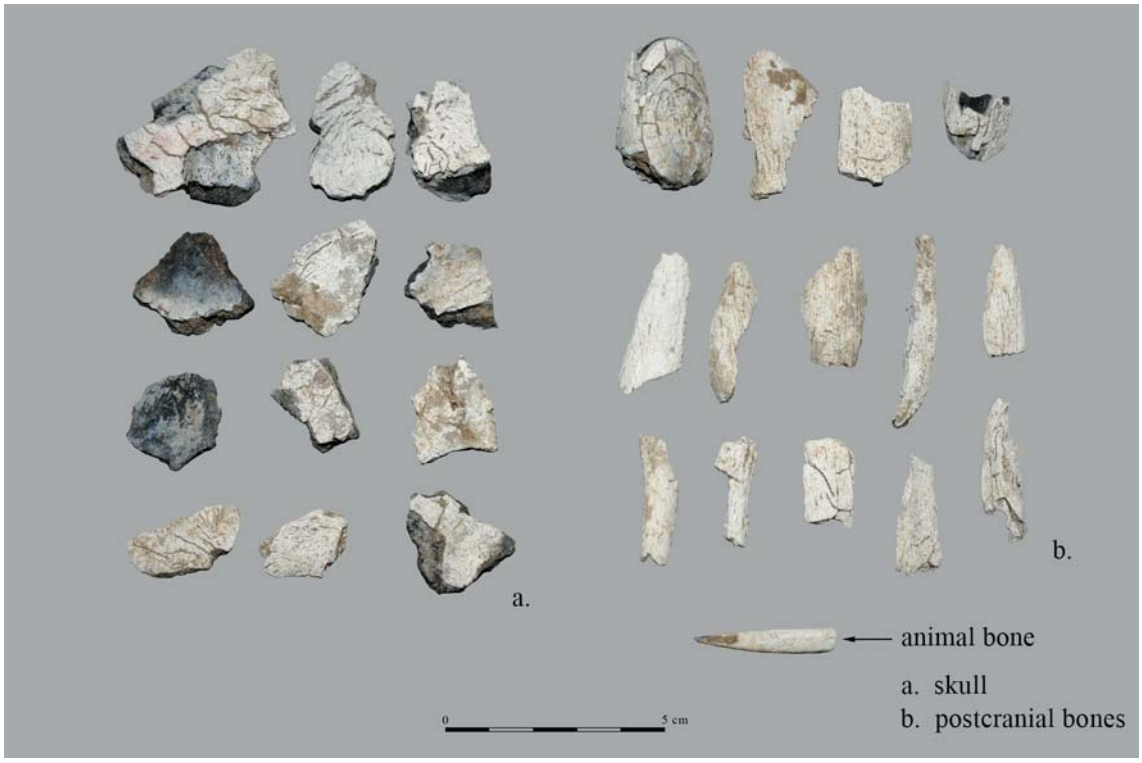


*Plate 13. Grave 435. Arrangement of the bone fragments according to anatomical position. It is clearly visible that the skull fragments were burnt heterogeneously (author's photo)*

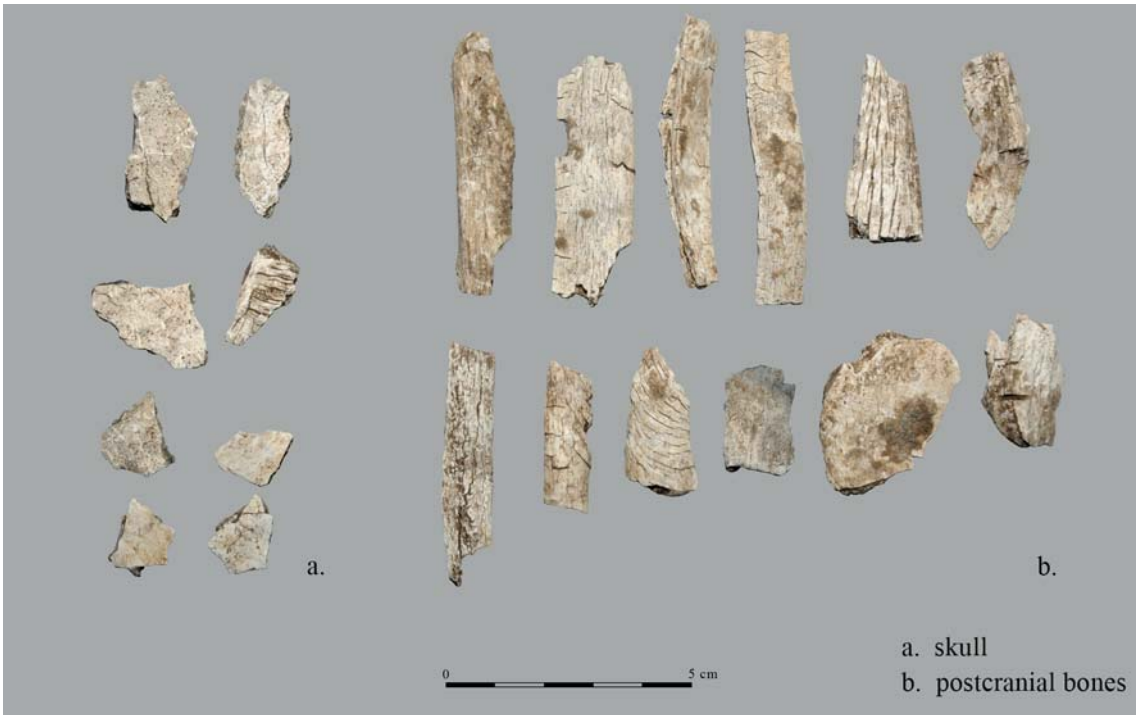


*Plate 14. Grave 451. Arrangement of the bone fragments according to anatomical position (author's photo)*

# THE PILISMARÓT-BASAHARC CEMETERY: RADIOCARBON DATING AND BAYESIAN MODELLING

DEREK HAMILTON

A total of 15 radiocarbon measurements are available on samples recovered from 12 cremation burials at the Pilismarót-Basaharc cemetery. All the samples were single entities of cremated human bone (ASHMORE 1999), and were submitted to the Scottish Universities Environmental Research Centre to be measured by Accelerator Mass Spectrometry (AMS).

The cremated human bone was pretreated following the methods set out by LANTING et al. (2001). The samples were combusted as described by VANDEPUTTE et al. (1996), with the graphite targets prepared and measured following NAYSMITH et al. (2010). The SUERC laboratory maintains rigorous internal quality assurance procedures, and participation in international inter-comparisons indicate no laboratory offsets; thus validating the measurement precision quoted for the radiocarbon ages (SCOTT 2003).

The radiocarbon results are given in *Table 1*. These are conventional radiocarbon ages (STUIVER–POLACH 1977), quoted according to the international standard set at the Trondheim Convention (STUIVER–KRA 1986), and calibrated with the internationally agreed curve of REIMER et al. (2013) using OxCal v4.2 (BRONK RAMSEY 1995; 1996; 2001; 2009). The date ranges in *Table 1* have been calculated using the maximum intercept method (STUIVER–REIMER 1986), and quoted with the endpoints rounded outward to 10 years when the error is 25 years or greater, and to 5 years when the error is less than 25 years. The probability distributions seen in *Figure 1* were obtained by the probability method (STUIVER–REIMER 1993).

## Methodological Approach

A Bayesian approach has been adopted for the interpretation of the chronology (BUCK et al. 1996). Although the simple calibrated dates are accurate estimates of the dates of the samples, this is usually not what archaeologists really wish to know. It is the dates of the archaeological events represented by those samples, which are of interest. In the case of the cemetery at Pilismarót, it is the overall chronology of the use of the site – when did activity begin; when did it end; and for how long did it take place – that is under consideration, not necessarily the dates of any individual samples. The dates of this activity can be estimated not only using the absolute dating information from the radiocarbon measurements on the samples, but also by using any relationships between samples.

Fortunately, methodology is now available which allows the combination of these different types of information explicitly, to produce realistic estimates of the dates of archaeological interest. It should be emphasised that the *posterior density estimates* produced by this modelling are not absolute. They are interpretative estimates, which can and will change as further data become available and as other researchers choose to model the existing data from different perspectives.

The technique used is a form of Markov Chain Monte Carlo sampling, and has been applied using the program OxCal v4.2. Details of the algorithms employed by this program are available from the on-line manual or in Bronk Ramsey's studies. The algorithm used in the model described below can be derived directly from the model structure shown in *Figure 1*.

*Table 1. Radiocarbon results from the Pilismarót-Basaharc cemetery*

| Lab ID | Sample ID | Material | δ13C (‰) | Radiocarbon Age (BP) | Calibrated Date (95% confidence) |
|---|---|---|---|---|---|
| SUERC-45840 | Grave 358: unurned cremation | cremated human bone | -20.7 | 4472 ±34 | 3350–3020 cal BC |
| SUERC-45841 | Grave 364: unurned cremation | cremated human bone | -19.6 | 4422 ±34 | 3330–2920 cal BC |
| SUERC-47875 | Grave 385: urned cremation | cremated human bone | -26.6 | 4614 ±30 | 3500–3350 cal BC |
| SUERC-45849 | Grave 388: ?urned cremation, covered with bowl | cremated human bone | -22.4 | 4527 ±34 | 3370–3090 cal BC |
| SUERC-45843 | Grave 390: unurned cremation | cremated human bone | -17.5 | 4391 ±35 | |
| SUERC-47873 | Grave 390: unurned cremation | cremated human bone | -20.8 | 4416 ±30 | |
| **mean 390** | T'=0.3; v=1; T'(5%)=3.8 | | | 4405 ±23 | 3100–2920 cal BC |
| SUERC-45844 | Grave 390a: unurned cremation | cremated human bone | -23.4 | 4605 ±34 | 3500–3340 cal BC |
| SUERC-45850 | Grave 399: unurned cremation | cremated human bone | -18.5 | 4074 ±34 | 2860–2490 cal BC |
| SUERC-47874 | Grave 399: unurned cremation | cremated human bone | -18.8 | 4507 ±30 | 3360–3090 cal BC |
| SUERC-47879 | Grave 409B: urned cremation | cremated human bone | -24.3 | 4698 ±30 | 3630–3370 cal BC |
| SUERC-45842 | Grave 411: unurned cremation | cremated human bone | -22.5 | 4723 ±34 | |
| SUERC-47870 | Grave 411: unurned cremation | cremated human bone | -20.4 | 4837 ±27 | |
| **mean 411** | T'=6.9; v=1; T'(5%)=3.8 | | | 4793 ±22 | 3645–3525 cal BC |
| SUERC-45848 | Grave 414: unurned cremation | cremated human bone | -18.6 | 4662 ±34 | 3630–3360 cal BC |
| SUERC-47871 | Grave 418: unurned cremation | cremated human bone | -20.0 | 4670 ±30 | 3630–3360 cal BC |
| SUERC-47872 | Grave 443: unurned cremation | cremated human bone | -23.5 | 4624 ±25 | 3500–3350 cal BC |

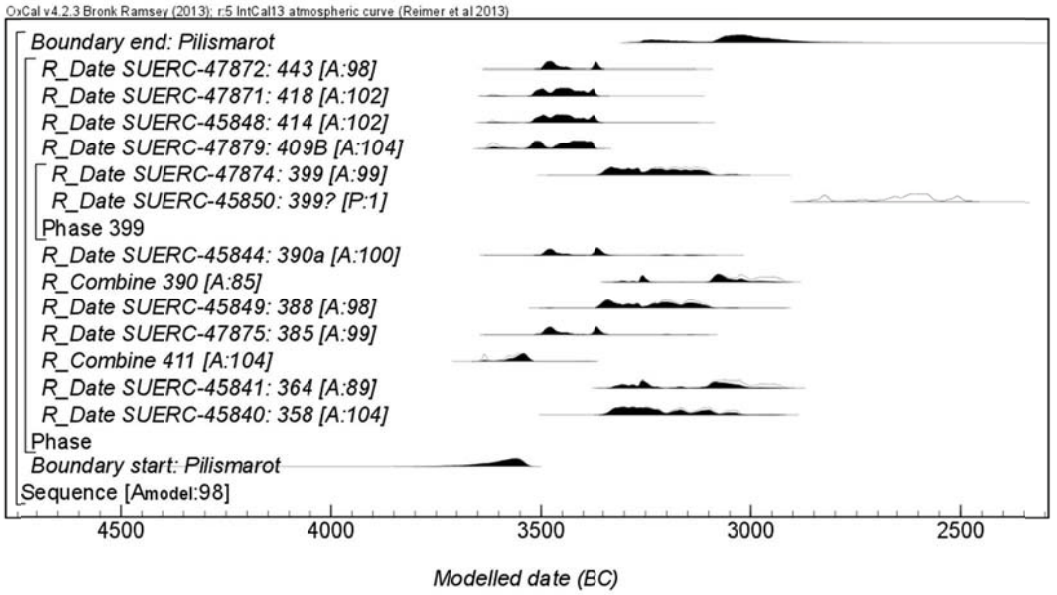


*Figure 1. Chronological model for Pilismarót. For each of the radiocarbon measurements, two distributions have been plotted, one in outline, which is the result of simple radiocarbon calibration, and a solid one, which is based on the chronological model use. The other distributions correspond to aspects of the model. For example,* 'start: Pilismarót' *is the estimated date that the burial activity began, based on the radiocarbon dating results. The large square 'brackets' along with the OxCal keywords define the overall model exactly*

## The Samples

The radiocarbon dating of the cremation burials at Pilismarót was undertaken in two rounds. Eight samples were dated in round 1, and measurements from three of these were replicated with fresh material in round 2, along with four other samples. The reason for the replication was that SUERC-45850 (4074 ± 34 BP) from Grave 399 was considerably younger than the other results. This sample, along with those from Graves 390 and 411, had been recorded in the laboratory as potentially not well cremated. VAN STRYDONCK et al. (2009) have shown that partly cremated bone, cremated at a temperature lower than 725º C, such that those that contained grey parts gave ages that were too young. For this reason, all three were repeated with samples of bone that appeared to be more calcined than the original samples, and in all three cases, the repeat measurement on the well-cremated samples was older than the original measurement.

- The two measurements from Grave 390 (SUERC-45843 and -47873) are statistically consistent (T'=0.3; v=1; T'(5%)=3.8) and have been combined prior to calibration following WARD and WILSON (1978), and produce **mean 390**, 4405 ±23 BP.
- The two measurements from Grave 399 (SUERC-45850 and -47874) are different by over 400 radiocarbon years. Since SUERC-45850 is from a sample that was not nearly as well calcined as the duplicate sample, it has been excluded from all further modelling.
- The two measurements from Grave 411 (SUERC-45842 and -47870) are not statistically consistent (T'=6.9; v=1; T'(5%)=3.8), however, they do pass the $\chi^2$ test at 3-sigma (T'(0.003%)=9.0). Given that the two measurements are on the same burial, the results are not so divergent to suggest one result is more likely incorrect and so the two measurements

have been co-combined prior to calibration following WARD–WILSON (1978), and produce **mean 411**, 4793 ±22 BP.

There was no stratigraphy between any of the dated cremations and so the results have been used in a Bayesian model as an unordered group of measurements that is used to estimate the start, end, and duration of cremation burial activity at the site.

## Results

The radiocarbon dates are in good agreement with the model assumptions ($A_{model}$=98). The modelling estimates activity began in 3735–3525 cal BC (95% probability; *Figure 1*; *start: Pilismarót*), and probably in 3625–3535 cal BC (68% probability). The activity continued for 280–815 years (95% probability; *Figure 2*; *span: Pilismarót*), and probably either 325–340 years (1% probability) or 475–715 years (67% probability). The burial activity ended in 3270–2845 cal BC (95% probability; *Figure 1*; *end: Pilismarót*), and probably in either 3245–3220 cal BC (2% probability) or 3085–2915 cal BC (66% probability).

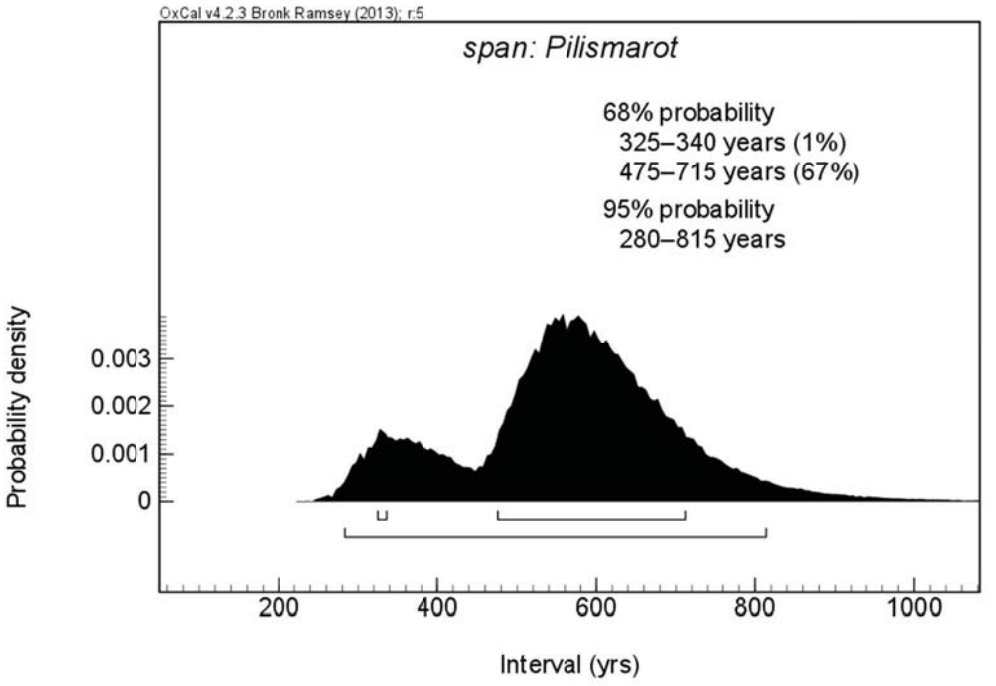


*Figure 2. Span of burial activity at Pilismarót, as derived from the chronological model in Figure 1*

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# LITHIC GRAVE GOODS FROM THE PILISMARÓT-BASAHARC CEMETERY

KATALIN T. BIRÓ

## Introduction

Spectacular advances have been recently made in the investigation of the stone artefacts of the Copper Age, and in particular of its later phase, the Late Copper Age.[1] Both the assessment of the lithic assemblages from classical sites such as Budakalász, Nagykanizsa and Zalavár,[2] and the discovery, excavation and publication of new extensive sites such as Balatonőszöd[3] have greatly increased our knowledge and evidence on Late Copper Age lithic industries.

The lithic assemblage from Pilismarót-Basaharc is a relatively small contribution to the overall image of Copper Age lithic industries. Its significance lies in the fact that it comes from a well-known, classical site and that it was recovered from graves, giving a personal aspect to each item.

## Stone artefacts from the graves

The following items were registered from the graves:[4]

*Grave 336*

1. Polished stone tool. Short shaft-hole axe, fragmented. Grey basalt (?). 90 x 62 x 47 mm, diam. of borehole 24 mm. Inv. no. 88.12.11 *(Pl. 2. 1)*.
2. Fragment of a polished stone tool. Butt fragment of a small shaft-hole axe with asymmetrical borehole and traces of sampling. Grey basalt (?). 49 x 55 x 23 mm. Inv. no. 88.12.12 *(Pl. 2. 3)*.

*Grave 340*

1. Polished stone tool. Short shaft-hole axe, with spoilt borehole, fragmented, with traces of sampling.[5] Whitish-grey pyroxenite, hornfels (?), light grey. 82 x 57 x 24 mm, diam. of borehole 22 mm. Inv. no. 88.16.7 *(Pl. 2. 2)*.

*Grave 346*

1. Micro-blade with distal cortex. Carpathian 2T type obsidian. 17 x 5 x 1 mm. Inv. no. 88.21.4 (see *Pl. 6. 2* on p. 112 for its illustration).

*Grave 386*

1. Micro-chip with traces of retouch. Transdanubian radiolarite, Szentgál type. 7 x 15 x 9 mm. Inv. no. 88.47.8 *(Pl. 1. 7)*.

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1 Dobosi 1968; Cs.Balogh 2000, 2004, 2009; Farkas 2002; Horváth 2009.
2 Bondár–Racky 2009; Cs.Balogh 2009; T. Biró 2013; M. Virág 1990; T. Biró 1998.
3 Zandler–Horváth 2010; Horváth 2014.
4 The description of the raw material is listed here on the basis of a macroscopical examination; the polished stone raw materials were studied in detail, see below.
5 Possibly by Cs. Ravasz.

*Grave 387*

1. Fragment of a polished stone tool. Edge fragment of a shoe-last axe, with traces of a fresh fracture (sampling) on the butt side. Grey basalt. 78 x 42 x 28 mm. Inv. no. 88.48.7 *(Pl. 2. 4)*.

*Grave 429*

1. Knife-like microblade with sickle polish, atypical truncation. Transdanubian radiolarite, Gerecse (?). Grey, burnt. 27 x 12 x 2.5 mm. Inv. no. 88.87.3 *(Pl. 1. 2)*.

*Grave 444*

1. Chip fragment. Transdanubian radiolarite, Szentgál type (?). Burnt. 14 x 16 x 2 mm. Inv. no. 88.101.7 *(Pl. 1. 6)*.
2. Fragment of a blade, medial part, trapeze form. Transdanubian radiolarite, Szentgál type. 11 x 8 x 3 mm. Inv. no. 88.101.7 *(Pl. 1. 5)*.

*Grave 451*

1. Blade-like flake. Primary decortication flake. Carpathian 1 obsidian. 50% cortex. 37 x 12 x 7 mm. Inv. no. 88.108.10 *(Pl. 1. 1)*.

*Grave 453*

1. Flake broken into two parts. Transdanubian radiolarite, Szentgál type. 31 x 23 x 4 mm. Inv. no. 88.110.13 *(Pl. 1. 3)*.

*Grave 454*

1. Micro-blade-like flake, broken into two parts. Magyarkút type hydroquartzite-silicified vulcanite. Light dull coloured, grainy texture. 25 x 14 x 2 mm. Inv. no. 88.111.7 *(Pl. 1. 4)*.

## Distribution of the lithic artefacts in the graves

Of the total number of 110 graves, only ten contained stone artefacts, typically one piece each, with only Graves 336 and 444 yielding two pieces *(Pl. 3)*. It is interesting, though, that two graves contained broken (and refittable) pieces (Graves 453 and 454, respectively), and that some of the polished stone artefacts were in a highly fragmented state (probably as a result of burning).

The shaft-hole axes (Graves 336, 340) were found in cremation burials, and therefore the sex of their owner cannot be established for certain; being items of high prestige and possibly weapons rather than tools, we can associate them with male burials. The other stone artefacts (Graves 386, 429, 444, 451, 453, 454) were also from cremation graves, but they are not sex-specific pieces.

## Typology

The complete find assemblage is very small, comprising twelve items altogether. The small set of tools comprises four polished stone artefacts (two shaft-hole axes, the butt fragment of a shaft-hole axe and a semi-finished or fragmented shoe-last axe). There are eight chipped artefacts in the material, two of them (perhaps intentionally) broken in half *(Pl. 1. 3–4)*. This could have been part of the funerary rite, but not necessarily so; two instances in seven seem to indicate a deliberate action. The chipped stone tool forms are very simple, mainly in a low stage of preparation: the most sophisticated form is a sickle blade with atypical truncation on the distal end and triangular sickle polish on the right proximal part. All the other

artefacts are simple, non-retouched pieces: short blade-like forms *(Pl. 1. 1–2, 5)* and small chips *(Pl. 1. 6–7)*. A primary decortication flake *(Pl. 1. 1)* made of obsidian is interesting from a technological point of view, indicating that obsidian was transported in the form of complete lumps and not as semi-finished products, and that it was probably processed on the settlement associated with the Pilismarót cemetery. All the forms are frequent in Copper Age contexts and are of general late prehistoric character.

## Raw material

The identification of the Pilismarót lithic artefacts was based on the comparative raw material collection of the Hungarian National Museum.[6] The raw material selection is also quite typical and common for the given area and chronological phase. The most interesting element is obsidian, originating from a distance of approximately 250–270 km (Carpathian 1 (Slovakian) as well as Carpathian 2T (Hungarian), Tolcsva area type). The "obsidian route" had to cross a major geographical boundary, namely the Danube. Pilismarót is located near the shallows of the Danube Bend, an important crossing point from earliest prehistoric times. Obsidian at Pilismarót is also known from the chain of Palaeolithic settlements along the Danube.[7] The use of obsidian was more or less continuous, as indicated by the most recently found prehistoric assemblages along the Danube.[8] At the Pilismarót-Basaharc cemetery, two pieces of obsidian were found, a primary decortication blade-like flake and a micro-blade.

Most of the Pilismarót chipped stone tools are made of various Transdanubian radiolarite types. The most common among them is Szentgál type radiolarite (represented by four specimens). Radiolarite from the nearest source, the Gerecse Mountains, is represented by one piece. The dominance of Szentgál radiolarite is hardly surprising as this raw material type is the dominant regional raw material for Transdanubia in general.[9]

There is only one hydrothermal siliceous raw material (hydroquartzite) in the assemblage. The potential source, based on a macroscopical examination, is the neighbouring Börzsöny Mountains, where similar raw material was collected in the Magyarkút area. This raw material was seemingly alternatively used as a substitute for long-distance trade items.[10] Its use was also suggested for the "artisan grave" assemblage from the Budakalász cemetery.[11]

The raw material of the polished stone artefacts is probably the most interesting aspect of the lithics from the Pilismarót cemetery. The specimens had been sampled and described by Csaba Ravasz in 1974. The manuscript report on the investigations has been recently located in the Archives of the Archaeological Institute.[12] Ravasz determined the raw materials as basalt (2 pieces), diabase (1 piece) and tuff (1 piece). No reference to provenance was made. New thin sections were made of the stone artefacts for the present study, with the following results.

Grave 336, shaft-hole axe *(Pl. 2. 1)*:[13] microdiorite. Magmatic rock with porphyritic-holocrystalline texture, metasomatically altered (clay mineralisation and carbonatisation). The main body consists of holocrystalline plagioclase with very low amount of quartz and no coloured components. The porphyric

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[6] T. Biró–Dobosi 1991; T. Biró et al. 2000.
[7] Dobosi 2011.
[8] Ikrény, Ménfőcsanak: Biró 2014.
[9] T. Biró–Regenye 1991; T. Biró 1984; T. BIRÓ 1998.
[10] Polish erratic flint, T. Biró 1989.
[11] Korek 1986; T. Biró 1998.
[12] A report on the examination of the lithic artefacts written by Csaba Ravasz, dated February 3, 1974, was found among Ida B. Kutzián's papers. The report is in the Archives of the Archaeological Institute, filed under Dok. 12/2002. "F" jegyzőkönyv.
[13] No. 17 ("diabase") in Cs. Ravasz's list.

crystals are small and the matrix is relatively coarse-grained, denoting a slowly solidified extrusive rock or dyke rock. Most of the rock is composed of plagioclase (90–95%) with less than 5 percent quartz and many disseminated opaque grains. The rock is probably altered by burning (cremation rite?). Possible source: Cserhát Mountains (?) *(Pl. 4)*.

Grave 336, shaft-hole axe *(Pl. 2. 3)*:[14] basalt. Typical basalt belonging to the young (Pliocene) volcanism. The texture is porphyric, contains mainly olivine (around 90%) and a subordinate amount of pyroxene (10%) as porphyric crystals. The matrix is holocrystalline with laths of plagioclase and small pyroxenes, slightly oriented, containing a large amount of disseminated opaque minerals. Possible origin: Nógrád–Gömör Mountains (?), but it could equally well originate from several regions of young basaltic volcanism within the Carpathian Basin *(Pl. 5)*.[15]

Grave 340, shaft-hole axe *(Pl. 2. 2)*:[16] coarse aleurolite or fine-grained sandstone (?). Very fine-grained equigranular rock, probably of sedimentary origin, with traces of burning and slight pressure. The recognisable minerals were biotite, muscovite and sericite, with moderate quantities of small quartz and limonitic tint. The biotite is opacitic, the matrix is very fine. Further examination of the rock is necessary for an exact classification and possible provenance study *(Pl. 6)*.

Grave 387, shoe-last axe *(Pl. 2. 4)*:[17] basaltic andesite. Pilotaxitic-trachytic texture with glassy matrix and microporphyric plagioclase laths in an oriented matrix. Many small opaque grains disseminated in the rock. Some patches with nontronitic transformation. Similar rocks were intensively studied from the Aszód–Papi földek site.[18] The provenance of this rock can be located, with high probability, to the southern parts of the Cserhát Mountains *(Pl. 7)*.

### Summary of provenance data

The stone artefacts of the Pilismarót-Basaharc cemetery originate from mainly regional resources (lying at distances over a day's journey, but less than 200 km). The single exception is obsidian, which was transported from a distance of at least 250–270 km. The contact territories of the Pilismarót cemetery, based on the lithic raw materials, are presented on *Pl. 8*.

## Acknowledgements

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[14] No. 19 ("basalt") in Cs. Ravasz's list.
[15] Horváth 1991; Füri et al. 2004.
[16] No. 20 ("tuff") in Cs. Ravasz's list.
[17] No. 18 ("basalt") in Cs. Ravasz's list.
[18] Judik et al. 2001; Judik et al. 2009.

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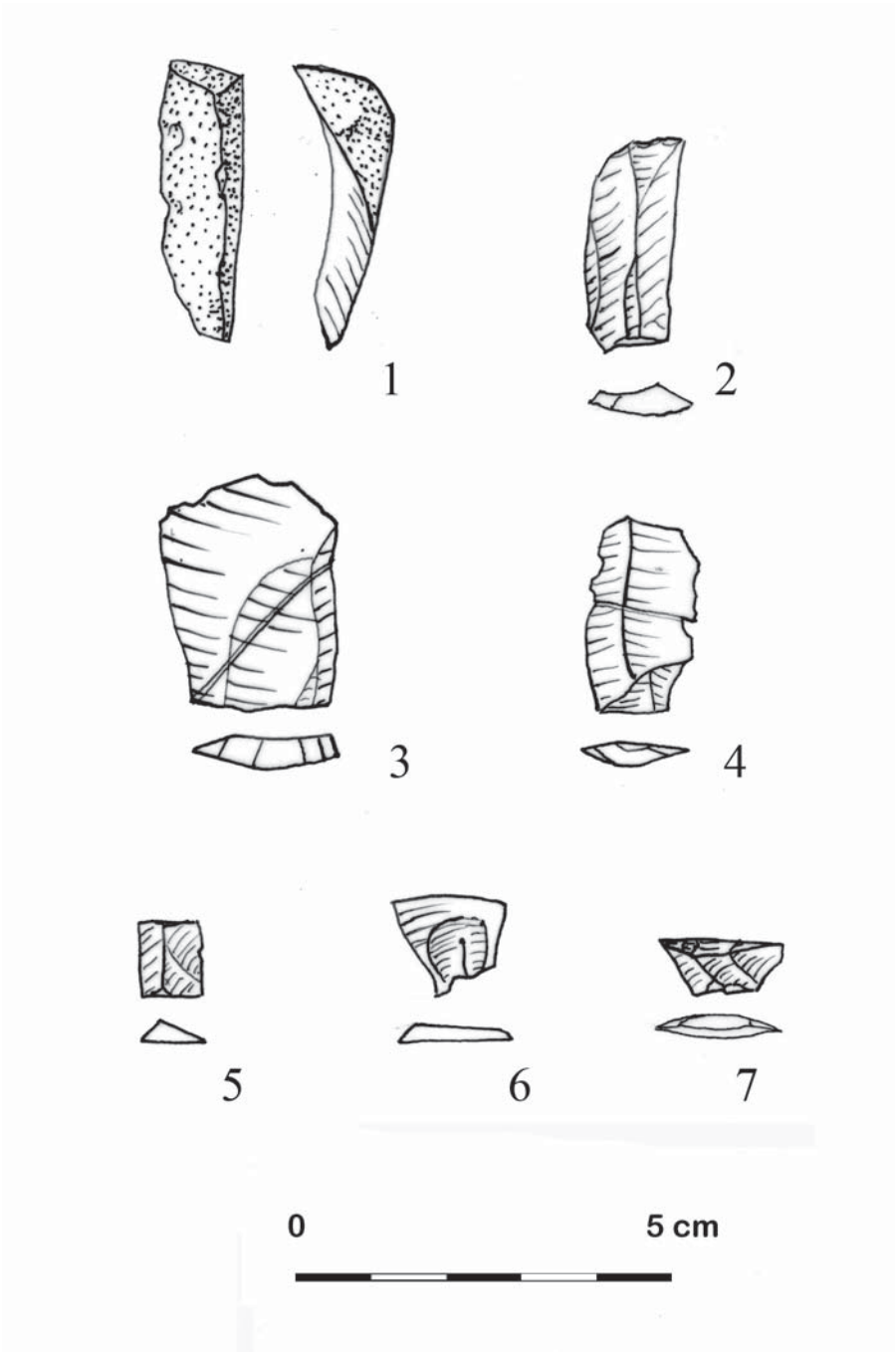


*Plate 1. Chipped stone artefacts from the Pilismarót-Basaharc cemetery (drawing by Katalin Nagy)*

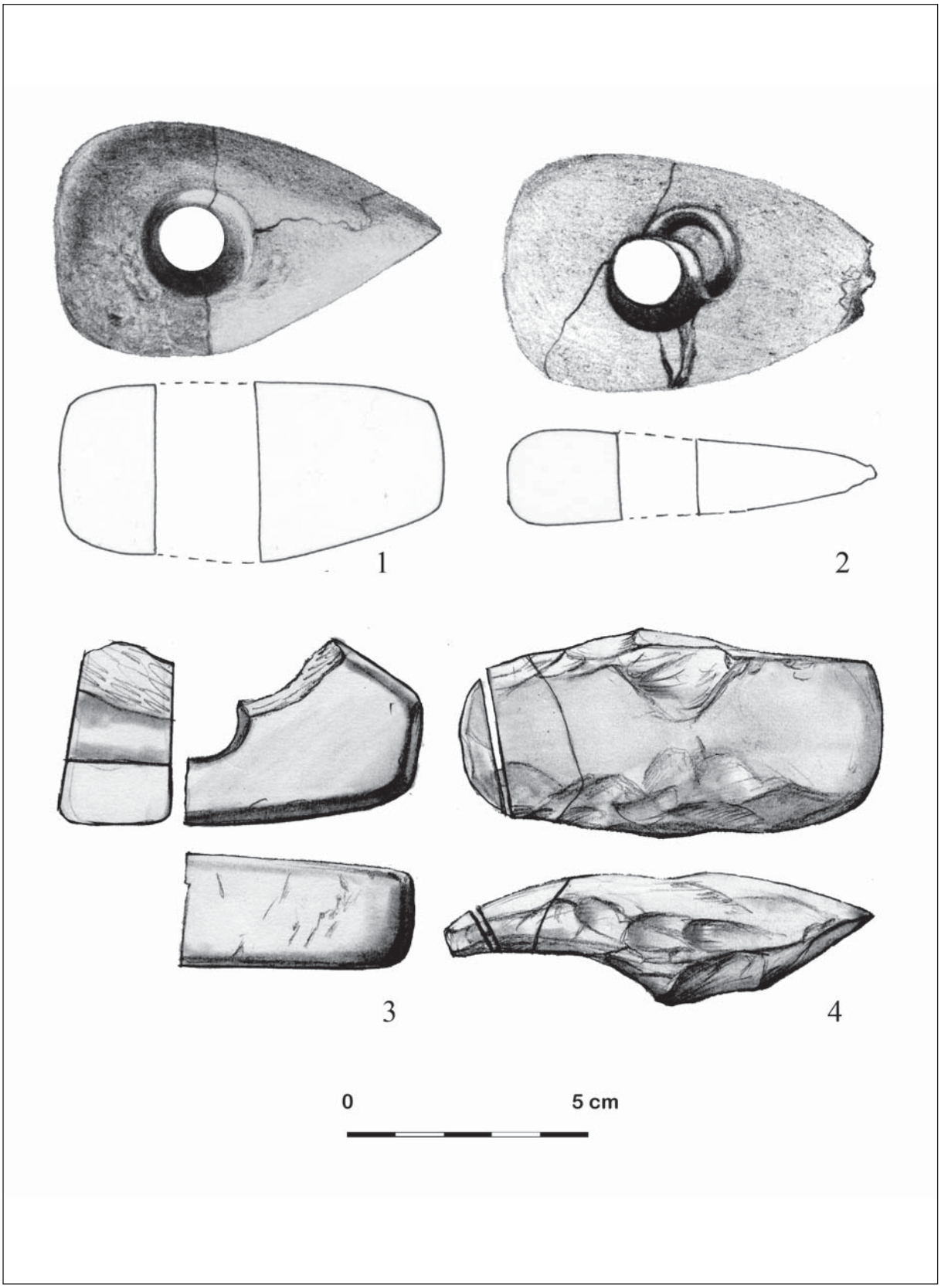


*Plate 2. Polished stone artefacts from the Pilismarót-Basaharc cemetery (drawing by Katalin Nagy)*

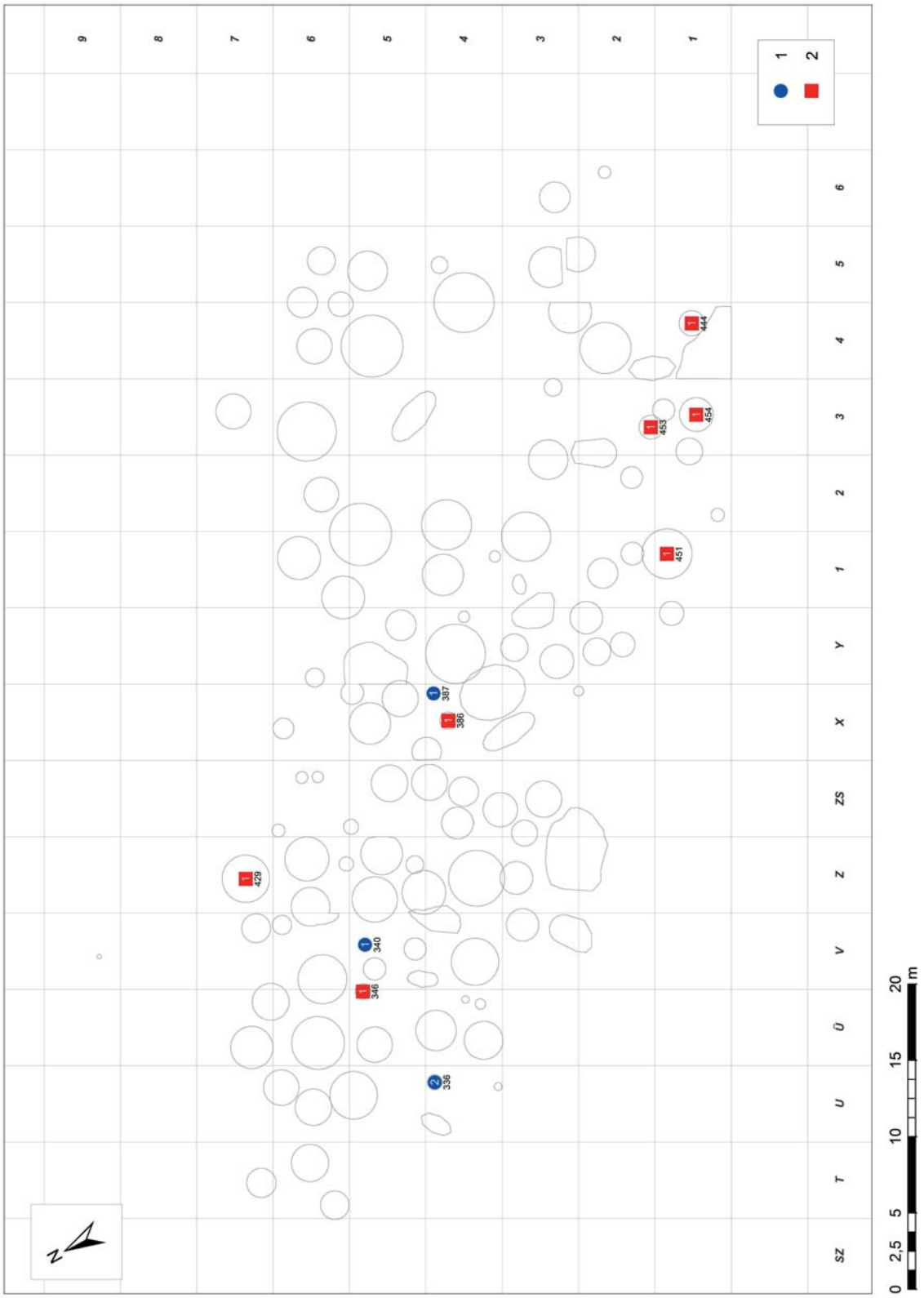


*Plate 3. Distribution of stone artefacts in the Pilismarót-Basaharc cemetery (drawing by Katalin Tolnai)*

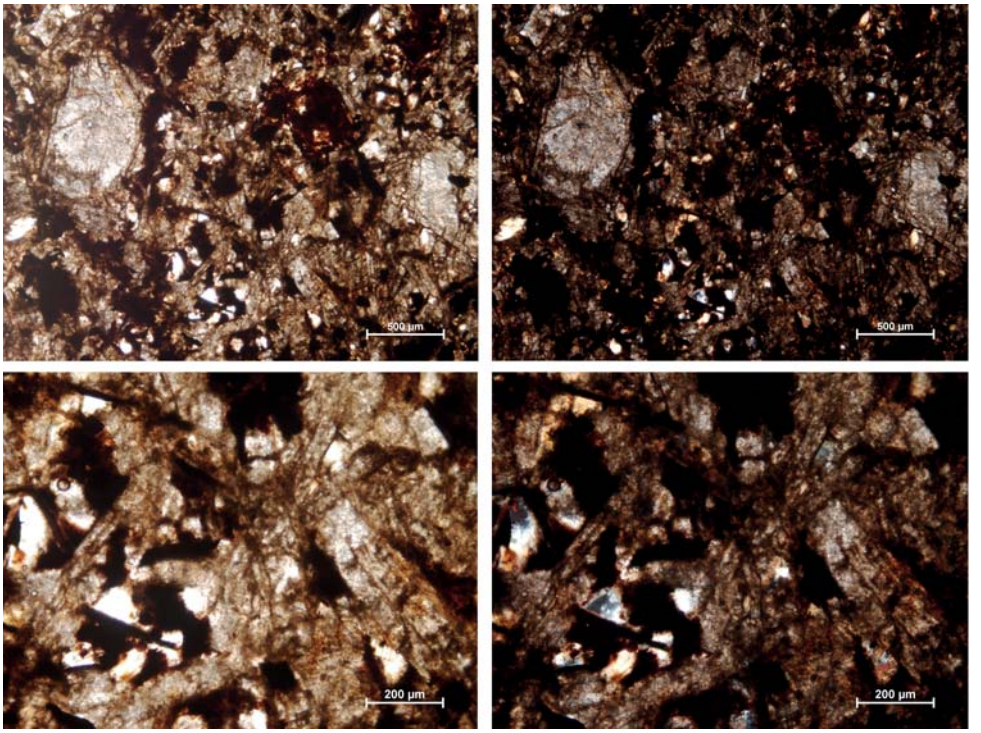


*Plate 4. Petrographical thin section of the artefact PM 88.12.11; a, 4x straight polarised light; b, 4x crossed polarised light; c, 10x straight polarised light, d, 10x crossed polarised light*

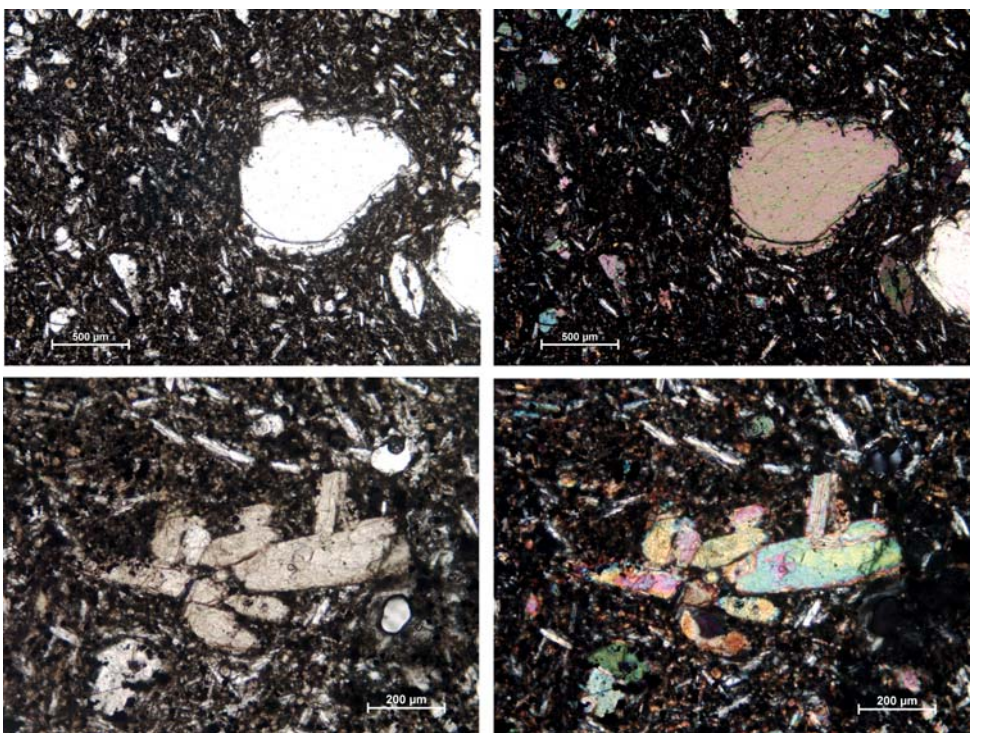


*Plate 5. Petrographical thin section of the artefact PM 88.12.12; a, 4x straight polarised light; b, 4x crossed polarised light; c, 10x straight polarised light, d, 10x crossed polarised light*

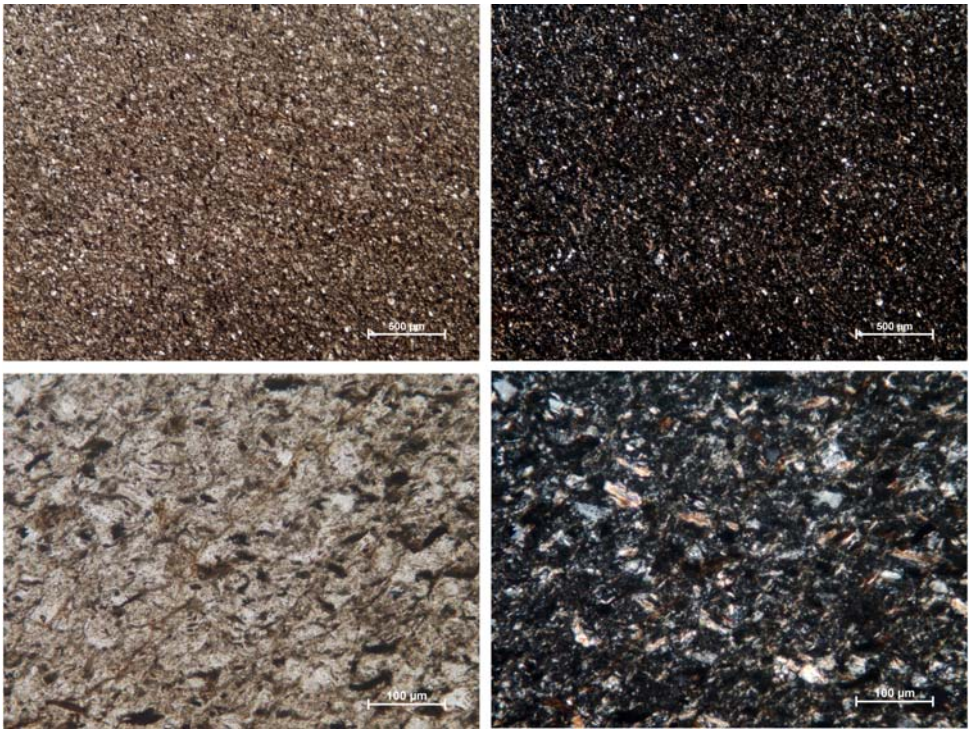


*Plate 6. Petrographical thin section of the artefact PM 88.16.7; a, 4x straight polarised light; b, 4x crossed polarised light; c, 20x straight polarised light, d, 20x crossed polarised light*

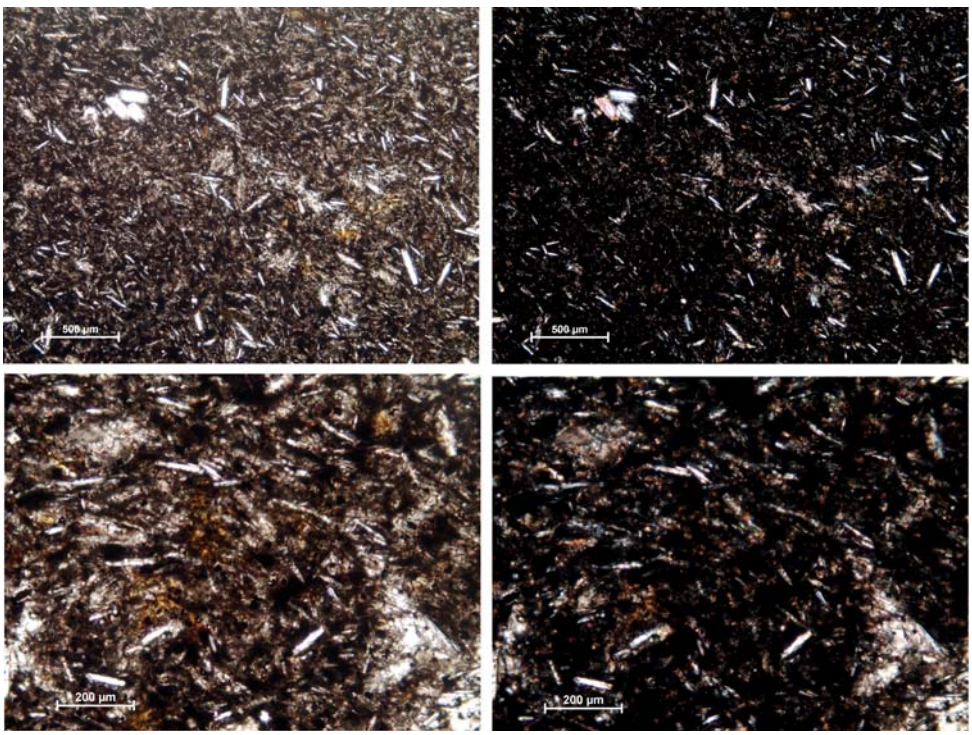


*Plate 7. Petrographical thin section of the artefact PM 88.48.7; a, 4x straight polarised light; b, 4x crossed polarised light; c, 10x straight polarised light, d, 10x crossed polarised light*

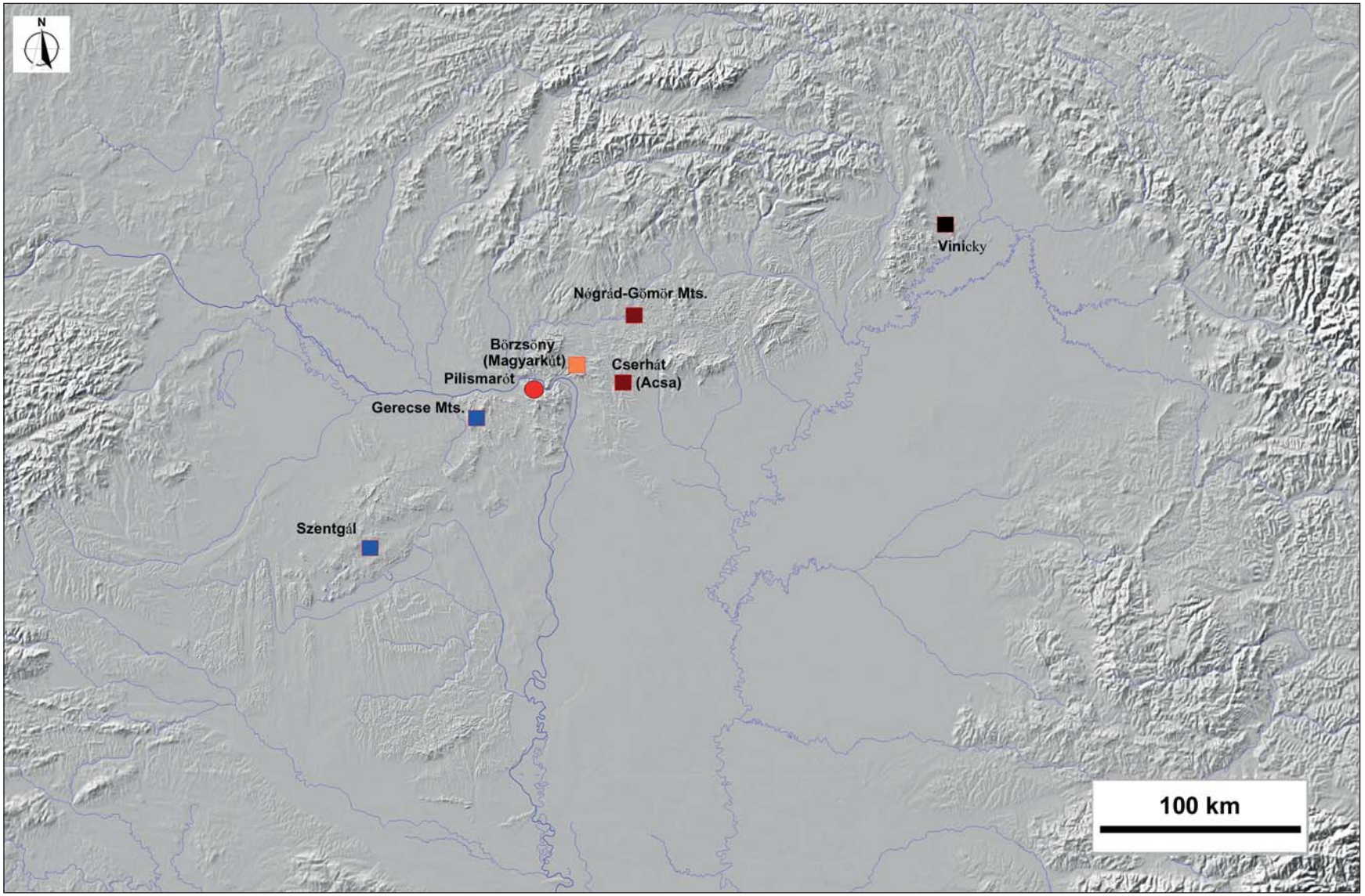


*Plate 8. Contacts of the population of the Pilismarót cemetery according to lithic raw material provenance (drawing by Katalin T. Biró)*

# ANIMAL BONE REMAINS FROM THE LATE COPPER AGE CEMETERY AT PILISMARÓT-BASAHARC

ERIKA GÁL

## Introduction

Even though many Late Copper Age animal bone assemblages are known from all regions of Hungary,[1] the number of animal remains found in Late Copper Age human graves is much more modest to the present day.

The earliest published grave offerings come from the Baden cemetery at Alsónémedi, where four cattle skeletons were found in two graves out of a total of forty-four burials. Grave 3 and Grave 28 both contained a cow and a calf, which were placed side by side. It has been suggested that the sacrificed animals were intended to display the wealth and high status of the deceased in their community.[2]

The more recently analysed cemetery at Budakalász-Luppa csárda, where over four hundred graves were unearthed, yielded a much more diverse animal bone assemblage. The finds included two cattle burials, various food offerings, and a number of bone, antler and tusk artefacts, recovered from a total of nineteen graves.[3]

Nine of the twenty-three graves uncovered in the Balatonlelle-Felső Gamász cemetery contained animal remains. The scarce assemblage comprising no more than twelve skeletal parts from three species (cattle, sheep or goat, and pig) was made up of food offerings and symbolic items alike.[4]

Consequently, the examination of the archaeozoological material from Pilismarót-Basaharc is a rare opportunity to gain a better understanding of the occurrence and exploitation of animal species during the Late Copper Age, as well as of the ritual practices and symbols of the Baden population.

## Description of the animal bone finds

Of the 110 excavated graves in the Pilismarót-Basaharc cemetery, seventeen yielded over thirty animal bones. The exact number of remains is unknown since I did not receive the bone finds from Graves 356 and 361, which appear in the documentation.[5] The location of the graves containing animal remains did not show any pattern; they were scattered across the entire area of the cemetery.[6] The list of animal remains recovered from individual graves can be found in the *Appendix*.

The listed finds mostly represent domestic animals, but two wild species could also be identified. Cattle (*Bos taurus* Linnaeus, 1758) was the most frequent, represented by eight remains from six graves *(Table 1)*. There were no apparent preferences regarding the body part placed into the graves: the head (horn core, mandible), the trunk (vertebra) and the limbs (*radius*, *ulna* and *metapodium*) were

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1 Vörös 2013, DVD1, Table 51; Vörös 2014, 325.

2 Bökönyi 1951; Korek 1951, 48–51.

3 Gál 2009.

4 Nagy 2010, 414–416, Tab. 4.

5 I would here like to thank Mária Bondár, editor of the present volume, for inviting me to study the animal bone remains. I am also grateful to her for providing the archaeological background to and information on the finds. This research was made possible by a generous grant from the Hungarian Scientific Research Fund (OTKA Project NF 104792).

6 See *Fig. 32* on p. 269.

all represented. Grave 404 yielded two articulated bones (*radius* and *ulna*) from this species. Since the epiphyses of the skeletal parts are missing, the age of this individual could not be determined. The cattle mandible fragment found in Grave 418 included all the molar teeth. Among these, the last ($M_3$) was not yet fully in use, indicating that this cattle was slaughtered before the age of 2.5 years.

*Table 1. The share of species and graves in the cemetery*

| Cattle | Sheep and goat | Pig | Dog | Red deer | Wild boar | Horse |
|---|---|---|---|---|---|---|
| Grave 363 | Grave 409 (male) | Grave 359 | Grave 403 | Grave 382 | Grave 387 | Grave 434 |
| Grave 399 | Grave 416 | | | Grave 439 | | |
| Grave 404 | Grave 420 (female) | | | | | |
| Grave 416 | Grave 422 | | | | | |
| Grave 418 | | | | | | |
| Grave 429 | | | | | | |

Remains of sheep (*Ovis aries* Linnaeus, 1758) and goat (*Capra hircus* Linnaeus, 1758) were found in four graves. These remains were not as well preserved as the cattle bones, and therefore they could not be identified to the species level. Even the represented skeletal part could only be determined in two cases (*humerus* in Grave 422, and *tibia* in Grave 409) due to the extensive fragmentation of the bone shafts.

Pig (*Sus domesticus* Erxleben, 1777) was represented by a single *femur* fragment from Grave 359.

In addition to the aforementioned species that usually represent food offerings in graves, remains from horse (*Equus ferus*/*E. caballus*) and dog (*Canis familiaris* Linnaeus, 1758) were also found in the Pilismarót-Basaharc cemetery. Grave 434 contained two articulated tarsal bones (the *astragalus* and the *calcaneus*) from the right limb of a horse *(Fig. 1. 1–3)*. Based on the age when the ossification of the calcaneal tuber is completed, this horse was at least three years old.[7]

Grave 403 yielded a partial dog skeleton, including remains from the head (mandible, *Fig. 1. 4)*, the pectoral girdle (*scapula*), the trunk (lumbar vertebrae) and the limbs (*humerus*, *radius*, *femur* and *metapodium*). The fully developed carnassial tooth in the dog mandible evidences that this dog died at the age of 4 years or later.[8]

Concerning the wild animals, badly preserved antler remains from red deer (*Cervus elaphus* Linnaeus, 1758) were found in Graves 382 and 439. The longitudinal fragment of a wild boar tusk (*Sus scrofa* Linnaeus, 1758) was recovered from Grave 387.

## Discussion

Body parts from a single animal species and individual were usually placed in the graves of the Pilismarót-Basaharc cemetery. The only exception is Grave 416 that contained remains from both cattle and sheep or goat. The bones from cattle, sheep or goat, and pig represent the remains of food offerings. Grave 399 contained three cattle teeth, while Grave 416 contained the base of a cattle horn core. Their role was most probably symbolic since these body parts have no nutritive value. The latter grave is one of the richest burials whose finds included prestige objects such as a miniature bowl and a clay pyramid.

The partial skeleton of dog found in Grave 403 can be interpreted as the remains of a sacrifice that was buried together with its owner. It is noteworthy that one of the five animal figurines found in the

[7] SCHMID 1972, 75, Table IX.
[8] SCHMID 1972, 77, Table X, Figure A and B.

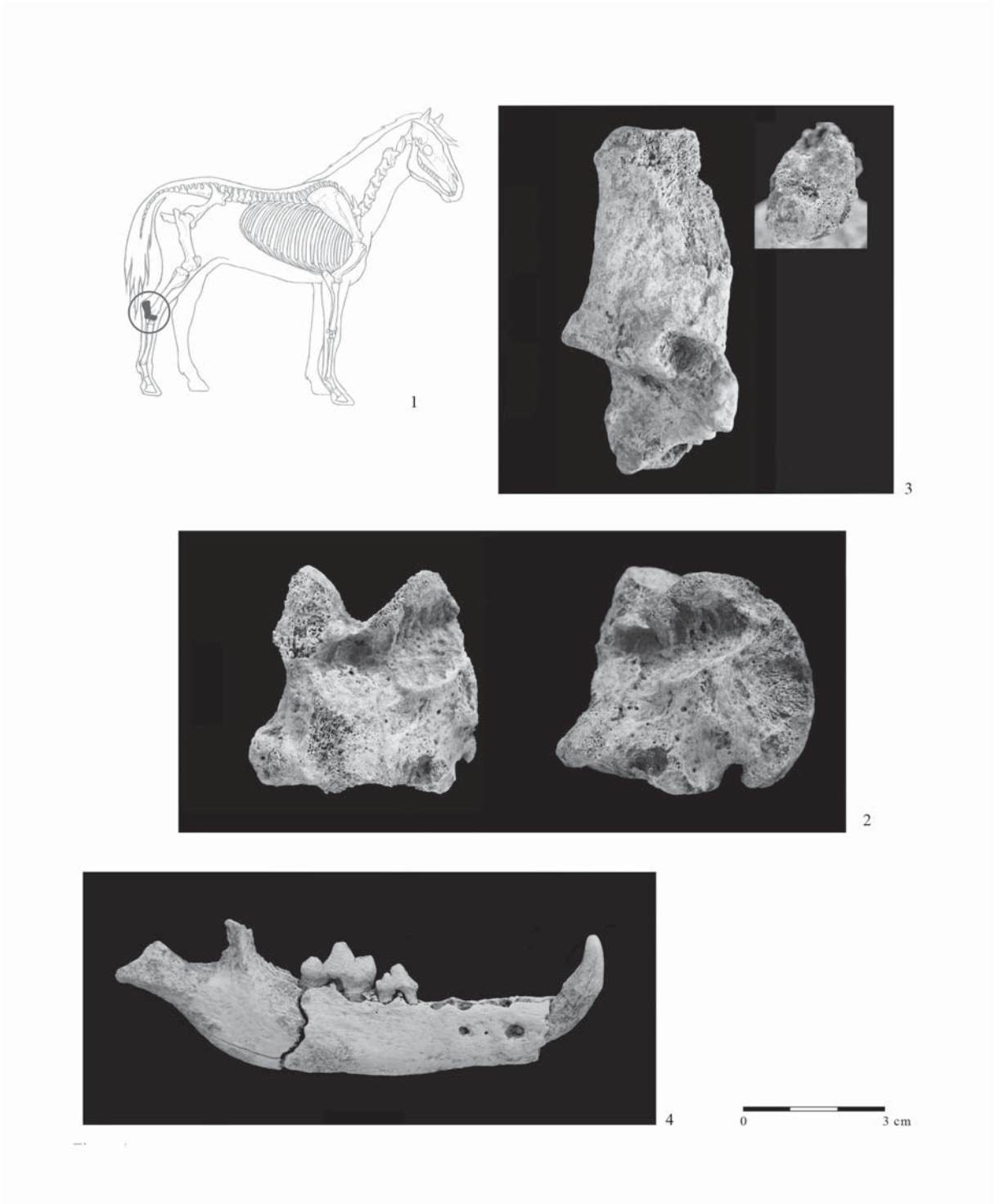


*Figure 1. 1. The ankle joint in horse (drawing by Anna Zsófia Biller); 2. Horse* astragalus *from Grave 434 (left: plantar view, right: lateral view); 3. Horse* calcaneus *from Grave 434 (left: medial view, right: proximal view); 4. Dog mandible with teeth from Grave 403 (lateral view)*

cemetery[9] also seems to represent a dog. This species must have been common and appreciated in the every-day life of the community, most likely engaged in herding, using the Pilismarót cemetery.

In the lack of cranial bones, there is no evidence that the two antler fragments found in Graves 382 and 439 originate from hunted red deer, and they could therefore equally well represent gathered shed antlers. Since their preservation is rather poor, and there were no visible traces that the antlers had been worked, it is hard to decide whether they represent fragments of antler tools or symbolic grave offerings.

Similarly, it remains open to question whether the fragment of a wild boar tusk found in Grave 387 was an artefact, a decorative item, or simply a grave offering. It is noteworthy that this grave also contained three prestige objects: a miniature bowl, a clay spoon and a stone axe.

It is interesting to note that among the five graves with animal figurines, two also contained animal bones which are interpreted as the remains of food offerings. Grave 359 yielded a femur diaphysis from pig, while Grave 418 yielded a cattle mandible fragment with molar teeth.

The role of the two horse bones found in Grave 434 was most probably symbolic. The tarsal bones do not represent any economic value; however, horse was not a common species in the Copper Age, and therefore its presence symbolises privilege and prestige. It must be borne in mind that a horse represents several hundred kilograms of good quality meat, meaning that the greater part of the slaughtered or killed animal could have been consumed by the community at the settlement, and only the dry limb was taken to the cemetery. Grave 434 contained additional prestige objects such as a miniature suspension vessel.

Currently, the taxonomic classification of Late Copper Age horse remains is one of the most controversial issues. The *calcaneus* from the Pilismarót cemetery has been recently radiocarbon dated and its age was specified as 3630–3530 cal BC.[10] This period corresponds to the earliest evidence for horse domestication in Botai, Kazakhstan. Both archaeozoological and lipid residue analyses indicated that at least some horses in the steppe region of northern Kazakhstan were domestic. Genetic studies regarding coat colour variation too seem to support this region and this time period for the domestication of horse.[11] Although later genetic analyses have suggested that horse domestication could also have occurred on the Iberian Peninsula, it seems more likely that local wild populations genetically contributed to the already introduced domestic herds.[12]

According to Sándor Bökönyi, domestic horse infiltrated into the Carpathian Basin in three waves: first at the beginning of the Copper Age, with the Cucuteni-Tripolye and Tiszapolgár populations, secondly during the Late Copper Age, with the Cernavoda-Boleráz population, and finally at the onset of the Early Bronze Age, with the Beaker population.[13] István Vörös noted that the latest presence of wild horse on the territory of Hungary could be documented at the end of Neolithic.[14] Consequently, the majority of the Copper Age horse remains found in Hungary – including the finds of the Early Copper Age (Tiszapolgár culture)[15] and the Middle Copper Age (Bodrogkeresztúr, Ludanice and Hunyadihalom cultures)[16] – has been identified as domestic horse,[17] the only exception being the remain from the Baden

[9] See *Plate 55* on p. 274.
[10] See *Fig. 34* on p. 271.
[11] Ludwig et al. 2009; Outram et al. 2009; Outram et al. 2011, 117–118.
[12] Warmuth et al. 2011; Bendrey 2014, 1442.
[13] Bökönyi 1978, 25–35.
[14] Vörös 2003, 59, Fig. 25.
[15] Bökönyi 1959, 56; Bökönyi 1974, 373; Bökönyi 1978, 25–28, Tables 1–3.
[16] Bökönyi 1978, 25; Vörös 1986, 87, Table 3; Vörös 1987, 125, Table 1; Vörös 1992, 281, Table 1.
[17] Bökönyi 1978, 29–36, Tables 4–10; Csippán 2012, 139–172; Vörös 2013, DVD1, Table 51; Vörös 2014, 325.

site of Budapest XVIII-Rákoscsaba-Major-hegy Dél that has been described as representing the wild form. However, domestic horse remains were also identified at the latter site (74 remains).[18]

In addition to the sites in Hungary, several Baden sites in neighbouring Slovakia also yielded horse remains. The assemblages found at Komjatice, Stránska and Šarišské Michaĺany were described as representing the domestic form,[19] while the 68 horse remains found at the coeval site of Svodín were identified as wild horse.[20]

However, the recent interpretation of rare horse bones in Copper Age assemblages does not exclude the incidence of the species' wild form since the Eurasian steppe belt once represented its natural habitat, and its continuous presence in the preceding cultures has been documented.[21] Although several suggestions have been recently made for how to distinguish between wild and domestic horses, ranging from changes in the relative frequencies of horse remains at sites through changes in size and possible pathological evidence to genetic analyses, this question will probably only be resolved once more radiocarbon-dated samples from the area under study will be available.

Nevertheless, a number of facts and pro and contra arguments can be cited in the case of the Pilismarót find as well. The presence of horse remains in Copper Age bone assemblages from Hungary and Slovakia varies, irrespective of period or culture, because of the sizes of samples *(Fig. 2)*. Proportions over 2% were typically observed in samples comprising less than five hundred identifiable animal bones, which are considered statistically unreliable assemblages. Therefore, the higher frequency of horse bones in small samples cannot be regarded as evidence of horse keeping and exploitation, but rather as the over-representation of remains.

The only exception in this respect is the Baden assemblage from Szigetcsép-Tangazdaság, in which horse was represented by 7.4% in a total of 958 identifiable bones. Moreover, two of the seven horses that had been slaughtered (or had perhaps died naturally) represented subadult individuals, which could indicate horse raising. On the other hand, the wild species identified at this site evidence that hunting and fishing were also practiced around the settlement, with the game animals including large-size species such as aurochs, red deer and brown bear.[22]

Regarding the frequency of horse remains in the assemblages, the most probable use of this species must also be considered. The meat and milk supply of the Late Copper Age communities was based on raising cattle, sheep and goat as indicated by the great number of bones and the age profile of these ruminants in the assemblages. Consequently, domestic horse, as a rarer and less reproductive species, represented a higher value and was rather used in transport and warfare. It is likely that horse was killed only when absolutely necessary, or for some reason such as sickness or old age. In this respect, its death outside the settlement was more likely, and thus one cannot expect many horse bones among the food and butchery remains.

Another issue is the role and proportion of skeletal parts from different species from funerary and ritual contexts. Since the animal bones found in graves may represent animal sacrifices, food offerings, symbolic grave offerings, or tools, implements and decorative items, their interpretation differs in each case. Except for the cemetery of Pilismarót-Basaharc, the data presented and compared in *Figure 2* represent waste remains from settlements. Even in the case of the Middle Copper Age site of Tiszavalk-Tetes, only the two pits next to the twenty-five graves yielded horse bones.[23]

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[18] Csippán 2012, 164–169.
[19] Nevizánsky 1987, 654; Ambros 1986, 28–29, Tables 1–2; Horváthová 2010, 83.
[20] Moser 2011, 23–25, Table 12.1–2, 111–118, 129.
[21] Bartosiewicz 2011, 127; Bendrey 2012, 140–144.
[22] Vörös 1988, 24–26, Tables 1–6.
[23] Vörös 1986, 84–86.

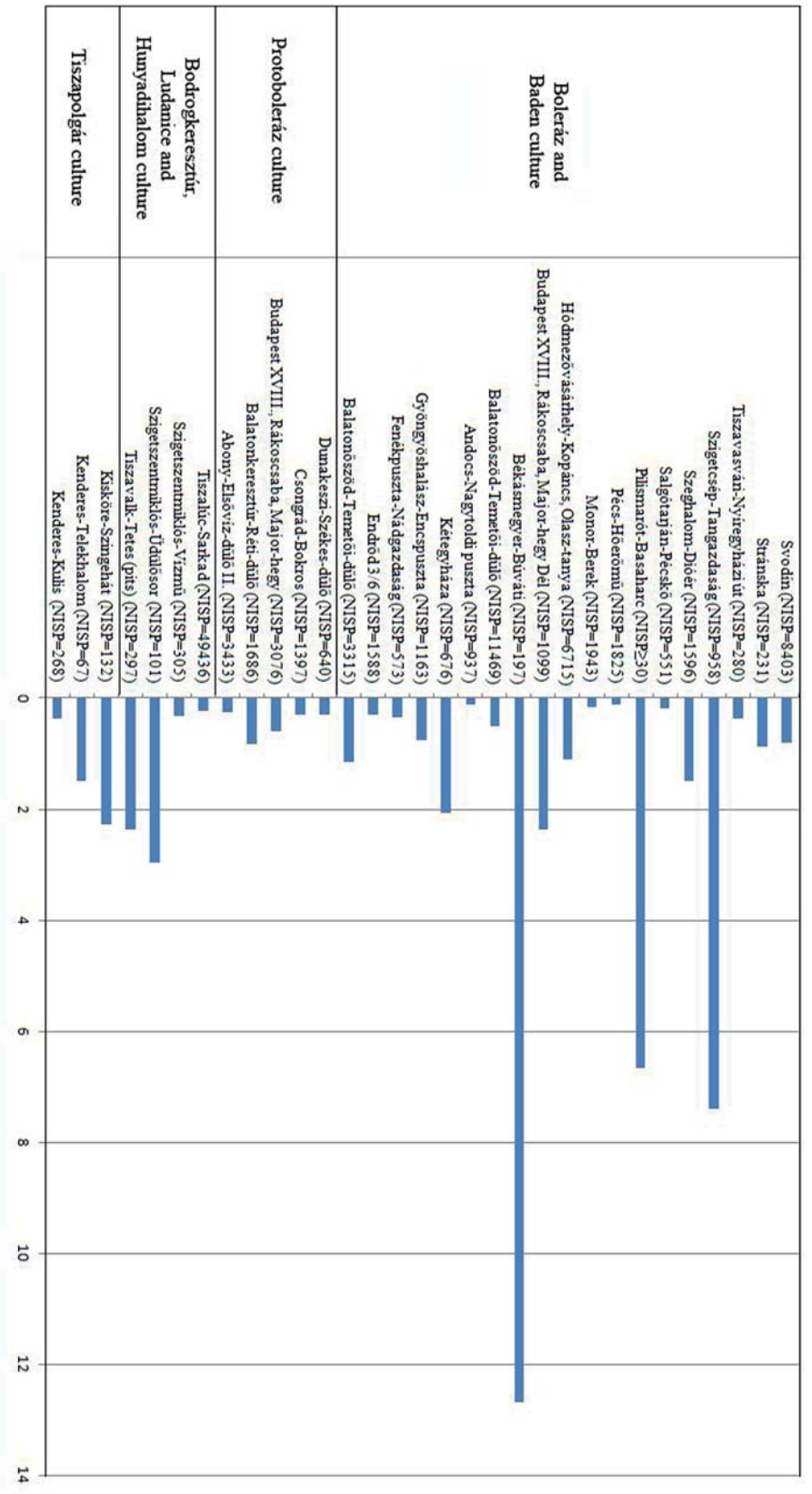


*Figure 2. The proportion (%) of horse remains in Copper Age assemblages from Hungary and Slovakia*

Horse remains from burials have been previously described from the Tiszapolgár cemetery of Deszk B and from the Bodrogkeresztúr cemetery of Magyarhomorog, although without a specification of the total number of animal bones recovered from the graves, and therefore a direct comparison with the Pilismarót-Basaharc cemetery and the other sites listed in *Figure 2* is not possible. However, the worked metacarpals found in Grave 44 at Deszk B and Grave 27 at Magyarhomorog represent rare and special finds. While the artefact from the latter site is published in the cemetery's monograph, neither a plan of the grave showing the skeleton and the position of grave goods, nor the horse bone artefact itself is illustrated.[24] Consequently, we lack information regarding the type or function of these objects.

Good parallels can be cited from the well-known coeval site of Botai in northern Kazakhstan. One of the two burial features, which contained two adult males, an adult female, and a 10–11-year-old child, yielded fourteen horses that formed an arc around one side of the burial. In addition, several pits surrounding the houses at this settlement also contained horse skulls, sometimes with articulated cervical vertebrae, and with complete dog skeletons or dog skulls. There is also evidence for the ritual use of horse phalanges at this site and the Botai site of Krasnyi Yar as well.[25]

A comparison with various horse skeletal parts from other archaeological samples (Avar period and the Hungarian Conquest period)[26] revealed that both the *astragalus* and the *calcaneus* from Pilismarót-Basaharc bear traces of inflammation. Pitting and perforations of the subchondral compact bone is most advanced on the plantar and lateral surface of an *astragalus (Fig. 1. 2)*, as well as on the dorso-medial surface and around the calcaneal tuber of a *calcaneus (Fig. 1. 3)*. These degenerative changes suggest that the entire heel joint must have been affected by a pathologic agent, most likely a bacterium.

Bacterial infections are rather common diseases, and may affect domestic and wild animals alike. These infections gain access to the joints either by haematogenous spread from another part of the body, or from penetrating wounds. If the immune system is unable to overcome the infection, the synovial fluid in the joint is replaced by pus. This causes the death of articular cartilage, which may partially or completely slough off, exposing the underlying bone to the bacteria. Where the condition heals, there is new bone formation from the periarticular margins of the joints.[27]

New bone proliferation could not be identified on the pathologic bones discussed here, allowing various interpretations. If the horse from Pilismarót was a domesticated form, one of the possibilities is that it died at the settlement because of the severe infection. Conversely, it may have been slaughtered because of its lameness that hindered its secondary exploitation such as riding and traction. If it was a wild horse, it could have more easily fallen a prey to hunters than its healthy conspecifics. On the other hand, a limping game animal is primarily exposed to carnivores in the wild. Taking into account that horse is a steppean species, its most likely predator in prehistoric times was Persian lion (*Panthera leo persicus* Meyer, 1826) that became extinct by the end of the Copper Age.[28]

The measurements of the two horse bones from Pilismarót-Basaharc are presented in *Table 2*. The *calcaneus* (111.1 mm) is larger than the *calcanei* found at the Baden sites of Békásmegyer-Buváti (104.0 mm) and Svodín (109.0 mm), respectively. Its size also exceeds the dimension of the *calcaneus* (108.5 mm) found in the Lengyel assemblage from the latter site, which undoubtedly originates from wild horse. The average length of the specimens found at the Early Bronze Age sites of Békés-Városerdő and Csepel-Háros, assigned to domestic horse, ranges between 107.4 mm (n=5) and 110.0 mm (n=14). The *astragalus* (58.8 mm) found at Pilismarót, however, is smaller than the average size of *astragali*

[24] Bökönyi 1959, 56; Bökönyi 1978, 25; Patay 1976, 184.

[25] Outram et al. 2011, 118.

[26] I would here like to thank archaeozoologist Annamária Bárány for providing access to the comparative bone collection housed in the Department of Archaeology of the Hungarian National Museum.

[27] Baker–Brothwell 1980, 123–126, Figs 14–15.

[28] Vörös 2003, 58.

found at Csepel-Háros (62.1 mm; n=25).[29] Domestic horse dominated in the animal bone assemblage unearthed at the latter site by 44.9%.[30] The cited data show that in the case of *calcaneus* and *astragalus*, bone size is not suitable for distinguishing wild horse from domestic horse.

*Table 2. Bone measurements (mm) taken according to von den Driesch (1976)*

| Measurement | Dog mandible | Horse astragalus | Horse calcaneus |
|---|---|---|---|
| Length of the premolar raw, P2-P4 | 39.2 | | |
| Length of the carnassial (M1) | 18.8 | | |
| Height of the mandible behind M1 | 24.5 | | |
| Height of the mandible between P2 and P3 | 16.8 | | |
| Greatest length | | 58.8 | 111.1 |
| Length of the medial part of the *Trochlea tali* | | 60.1 | |
| Greatest breadth | | 62.0 | |
| Breadth of the *Facies articularis distalis* | | 54.2 | |

Since the withers height of horses could not be directly calculated from the *calcaneus* or *astragalus*, we used an indirect method for estimating the stature of the specimen from Pilismarót-Basaharc.[31] Comparing the size of the *calcaneus* with the ratio of *calcanei* and *metatarsi* from Avar horses,[32] the length of the *metatarsus* of our specimen can be estimated as 270.8 mm (111.1 x 1.278 + 128.770). The calculated withers height according to Vitt's method would be 141.9 cm that corresponds to a medium-size horse.[33] Although Ambros and Müller's data set includes the size of forty-two sexed horses, the dimensions of females and males are not treated separately, and therefore the sex of the specimen from Pilismarót-Basaharc could not be determined.

The estimated withers height of the horse from Pilismarót-Basaharc falls within the largest dimensions of other Late Copper Age horses. The two complete *metacarpi* found in Boleráz features at Balatonkeresztúr-Réti-dűlő came from horses with a withers height of 136.7 cm and 143.2 cm, respectively. The length of the *radius* found at the Baden settlement of Hódmezővásárhely-Kopáncs, Olasz-tanya indicated a 138.8 cm tall horse.[34] Four complete long bones from the Baden features of the Balatonőszöd-Temetői-dűlő site originated from horses with a withers height between 135.0–143.0 cm.[35] The smallest withers height (125.3 cm) for a Baden horse in Hungary was calculated from a *metacarpus* found at Szigetcsép-Tangazdaság.[36]

Among the graves containing animal remains at Pilismarót-Basaharc, the sex of the deceased could be determined in two cases only: a 20–59-year-old man was buried in Grave 409, and a 20–39-year-old woman in Grave 420 *(Table 1)*. Because of the scarcity of data, no correlation could be established between the animal species or skeletal part and the sex of the deceased. In the few cases when the age of the deceased could be determined, they all represented adults over 20 years (see the *Appendix*).[37]

[29] Bökönyi 1974, 543–556; Moser 2011, 117, Table 23.3.3.
[30] Bökönyi 1974, 354.
[31] I am grateful to László Bartosiewicz for providing the dataset and his help in the statistical calculations.
[32] Ambros–Müller 1980, 135–138.
[33] Vitt 1952, 172.
[34] Csippán 2012, 388–389.
[35] Vörös 2013, DVD1, Table 28; Vörös 2014, 309.
[36] Vörös 1988, 21.
[37] I am grateful to anthropologist Kitti Köhler for the information on the age and sex of the deceased.

## Conclusion

The archaeozoological assemblage found at Pilismarót-Basaharc shows a number of similarities with, as well as divergences from, the animal remains unearthed in the coeval cemeteries of Budakalász-Luppa csárda and Balatonlelle-Felső Gamász. One shared trait is the scarcity of animal bones in the graves, especially at Pilismarót and Balatonlelle. In addition to food offerings, objects with a symbolic role such as cattle horn core (with or without the skull) and cattle and wild boar teeth, as well as antler artefacts were found in all three cemeteries. No correlation could be identified regarding the type of offering or species and the age or sex of the deceased.

Pig was present and cattle was the most frequent species in the assemblage from Pilismarót-Basaharc; in contrast, pig remains were not found at Budakalász and small ruminants dominated the assemblage. The greater economic value of pig and cattle could be a reflection of the wealth of people buried at Pilismarót.

Beyond these, a number of archaeozoological finds make this cemetery quite unique. Dog bones have not yet been recovered from a Late Copper Age cemetery. The dog sacrifice found in Grave 403 perhaps represent loyalty or a similarly close relationship between the animal and its owner. The length of the carnassial tooth (18.8 mm) falls very close to the dimension of comparable teeth found at Polgár-Basatanya and Aparhant-Felső legelő (19.0 mm and 19.2 mm, respectively).[38]

The most surprising finds from Pilismarót-Basaharc, however, are the two articulated horse bones which are unparalleled in other Baden cemeteries. The skeletal parts of the medium-size horse, which has similar dimensions as the coeval horses, may be interpreted as a symbolic, "*pars pro toto*" offering. This would be an indication of the social status of the deceased as indicated also by various prestige objects found in the grave. Although the pathologic condition of bones, which most likely was a bacterial infection, would suggest that a domestic horse had died or was slaughtered at the settlement, the possibility that a weak wild horse was hunted cannot be excluded either. Further analyses based on genetic methods will hopefully reveal more information regarding the sex and origin of this horse, as well as its relationship with the Late Copper Age and Early Bronze Age horses identified from the region of Pilismarót-Basaharc.

## Appendix

Grave 356 (?)
: Animal bone.[39]

Grave 359 (adult, 20–x years old)
: Femur *diaphysis* from pig.

Grave 361 (?)
: A number of animal bone fragments.[40]

Grave 363 (adult, 20–39 years old)
: Diaphysis fragment from a cattle *metatarsus*, fragments of a lumbar vertebra.

Grave 382 (adult, 20–x years old)
: Cortical fragments of a red deer antler beam.

Grave 387 (?)
: Tusk fragment from wild boar.

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[38] Bökönyi 1974, 557; Bartosiewicz 2000, 84, Table 2.
[39] Data taken from the grave description.
[40] Data taken from the grave description.

Grave 399 (adult, 20–x years old)
Three upper teeth from cattle.
Grave 403 (adult, 20–x years old)
Bone fragments from a partial dog skeleton: mandible with teeth (C-$M_1$), *scapula,* lumbar vertebra, *humerus*, *radius*, *femora*, *metapodium (Fig. 1. 4)*.
Grave 404 (?)
*Radius* and *ulna* fragment from cattle.
Grave 409 (adult male, 20–59 years old)
*Tibia* from sheep or goat.
Grave 416 (adult, 20–x years old)
Horn core fragment from cattle, long bone *diaphysis* fragment from a small ungulate.
Grave 418 (adult, 20–x years old)
Cattle mandible with molar teeth ($M_{1-3}$).
Grave 420 (adult female, 20–39 years old)
Long bone *diaphysis* fragment from a small ungulate.
Grave 422 (?)
*Humerus*- and other long bone *diaphysis* fragment from sheep or goat.
Grave 429 (?)
Proximal fragment of cattle *metapodium*.
Grave 434 (adult, 20–x years old)
*Astragalus* and *calcaneus* from horse *(Fig. 1. 2–3)*.
Grave 439 (?)
Cortical fragment from red deer antler beam or crown.

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This monograph presents the final report on Pilismarót-Basaharc, one of the most remarkable cemeteries of the Late Copper Age in the Carpathian Basin. The 110 cremated burials of the cemetery were excavated by István Torma.

The interpretation of cemeteries as ritual spaces only gained ground in Hungarian research during the past few years. Cemeteries can be assigned to the cognitive sphere in this sense, and some scholars believe that this sphere cannot be decoded using conventional archaeological approaches and methods because its symbolism will always elude scholarship. However, this is not the case. While cemeteries are certainly not the direct continuation of one-time life, they are ritual, mystical spaces that have preserved various imprints of former beliefs, ceremonies and rites.

# The Late Copper Age Cemetery at *Pilismarót-Basaharc*

## István Torma's Excavations (1967, 1969–1972)

*

*by* Mária Bondár

This book presents a description of the burials, a typological analysis of the grave goods and a meticulous examination of the burial rites practiced by the community using the cemetery. The process of miniaturisation is reflected by several items in the grave inventories (miniature vessels, various small finds, animal figurines and a wagon model). In the literate civilisations of Antiquity, miniature objects have a clear association with funerary rites, with the perhaps best-documented evidence coming from ancient Egypt, where miniature objects and models had a ritual meaning and were believed to link the present with eternity.

The archaeological chapters are supplemented with the physical anthropological analysis of the human cremated remains and with the radiocarbon dates made on calcined bones as well as with studies on the lithic material and the animal bone sample.

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